1989

Type and level of psychopathology and object relations in eating-disordered females.

Sally George. Wright
University of Windsor

NOTICE

The quality of this microform is heavily dependent upon the quality of the original thesis submitted for microfilming. Every effort has been made to ensure the highest quality of reproduction possible.

If pages are missing, contact the university which granted the degree.

Some pages may have indistinct print especially if the original pages were typed with a poor typewriter ribbon or if the university sent us an inferior photocopy.

Reproduction in full or in part of this microform is governed by the Canadian Copyright Act, R.S.C. 1970, c. C-30, and subsequent amendments.

AVIS

La qualité de cette microforme dépend grandement de la qualité de la thèse soumise au microfilmage. Nous avons tout fait pour assurer une qualité supérieure de reproduction.

S'il manque des pages, veuillez communiquer avec l'université qui a conféré le grade.

La qualité d'impression de certaines pages peut laisser à désirer, surtout si les pages originales ont été dactylographiées à l'aide d'un ruban usé ou si l'université nous a fait parvenir une photocopie de qualité inférieure.

La reproduction, même partielle, de cette microforme est soumise à la Loi canadienne sur le droit d'auteur, SRC 1970, c. C-30, et ses amendements subséquents.

TYPE AND LEVEL OF PSYCHOPATHOLOGY AND OBJECT RELATIONS IN EATING-DISORDERED FEMALES

by

Sally George Wright

M.A., Oakland University

A Dissertation
Submitted to the Faculty of Graduate Studies
through the Department of Psychology
in Partial Fulfillment of the
Requirements for the Degree
of Doctor of Philosophy at the
University of Windsor

Windsor, Ontario, Canada
1989

ISBN 0-315-61014-X

Wright, Sally George

Type and Level of Psychopathology and Object Relations Among Eating Disordered Females

Due to an error in pagination, there is no page 285.

Please also note the addition of unnumbered pages into the prefatory material.

ACKNOWLEDGEMENTS

I would like to dedicate this dissertation to William Rowell, Ph.D., who helped me see the spectrum of color between black and white and to my daughter, Sarah Anne, for patience, support, and love during the past two years of dissertation work. I would also like to thank Marvin Backer, Ph.D., who taught me to use self-hypnosis so I could go to a quiet place when the stress became too great and to his wife Susan, for her friendship and cheerful outlook. For Karen Ore and Daniel and all my other dear Quaker and UU friends for their belief that I could finish and their companionship and encouragement when I felt like quitting, I will be forever grateful. For my friends, Karen Day, Verla Dynneson, Karen Frederick and all the other interns and practicum students from MSU who encouraged me and listened to both my "good" ideas and my fears; thank you for being there.

I would also like to thank two very special friends, Carole Hindle and Dick Stanley, who opened their home to me when I was still commuting from Montana and who helped me keep my perspective by reminding me of the world beyond the dissertation. I would also like to thank Susan and Alan Browne who also provided me with a place to stay in Michigan and to Susan for asking thought-provoking questions.

I was especially lucky in the supervisors I had on internship and at Margaret Montgomery. Thank you, Barbara Honeyman, Ph.D., for normalizing much I was going through while trying to be a parent and write a dissertation and John O'Connell, Ph.D., for allowing me to use the Counseling Center at Montana State University to begin my study and to Nancy, the secretary there who helped me obtain subjects and made

sure their packets were returned. Thanks are also due to Margaret Zerba, Ph.D. and Mary Slater, Ph.D., supervising psychologists at Montgomery, who helped me coordinate working and going to school and who encouraged me when I felt as if I'd never reach my goal. Thanks to Marge, too, for the hours of drudgery spent helping me code data.

Thank you to Sally Graham for all kinds of support, both moral and practical. Thank you to Margy Kernan for sharing her experiences finishing her dissertation and trying to parent. Thank you to Kim Arnold and Carrie Crawford, for without such good babysitters, I could not have felt comfortable leaving Sarah Anne so often while I studied.

To Mrs. Kypros and Cally, thank you for your excellent typing and cheerfulness during constant revisions and to Liz Duffin, thank you for your patience and sense of humor while helping with the preliminary typing.

Special thanks go to William Balance, Ph.D., my dissertation chairman for encouragement, thoughtful listening, and always helpful, constructive and appropriate suggestions. Thanks also go to his wife, Gwen Balance, Ph.D., for making me feel welcome when I came for work sessions. I would also like to thank Richard Moriarty, Ph.D., for his helpful suggestions, encouragement, and probing questions. Thanks are also due to Rosemary Cassano, Ph.D. for agreeing to be on the committee in mid-stream and for offering helpful comments and to Cheryl Thomas, Ph.D., for her willingness to answer questions and her availability. I would also like to thank Ann McCabe, Ph.D., for her assistance as my academic advisor and her input as statistician on my dissertation. I also appreciate the help Robert Cahill, Ph.D. gave me in understanding

psychoanalytic concepts, and for fitting me into his busy schedule. Special thanks are also due to Harold Lerner, Ph.D., my external examiner, who took such care in reading my dissertation and in making comments and suggestions.

I would like to thank my mother for financial assistance and for inspiring my interest in pathological narcissism, my sister, Diane Schwarz, for believing in her "baby sister," and my cousin, Terry Preston, Ph.D., for being such a good role model and listener. Thanks to Karen Price and Kathleen Chudomelka, fellow psychologists and my "family" at Montgomery who constantly cheered me on.

I would like to thank all the therapists who took time to help me find subjects and to make sure materials were returned, especially Judy Baldridge, Susan Adams, Jackie Odom, Angela Rodolico, Debra Dalton, Donna Kulick, Margaret Notar, Kenneth Pitts, Susan Sindelar, Ann Moye, Helen Heaton, Sandra Kroulik, and Amy Baker-Enright who all provided me with more than one subject. Finally, I would like to thank the subjects who gave of their time and shared their thoughts and feelings in addition to their responses to the questions. In the midst of their psychological pain, these volunteers were still willing to reach out and be of help to others.

TABLE OF CONTENTS

ABSTRACT ii

ACKNOWLEDGEMENTS iii

Chapter — Page

I INTRODUCTION 1

Personality Characteristics Among the Eating-disordered. 7
The Spectrum Concept of Eating Disorders 20
Brief Discussion of Object Relations Theory as it relates to Eating Disorders 25
Object Relations in the Eating-disordered. 31
Summary and Hypothesis 32

II METHODOLOGY AND PROCEDURE. 41

Subjects 41
Materials. 55
Millon Clinical Multiaxial Inventory-II (MCMI-II) . . 56
Eating disorder Inventory (EDI) 59
The Diagnostic Survey for Eating Disorders-Revised (DSED-R) 61
Blishen Occupational Class Scale. 62
The Bell Object Relations Test (BORT) 63
Procedure. 65

III RESULTS. 70

Results of Initial Tests of ANOVA Assumptions. 70
Preliminary Analyses of EDI, BORT, AND MCMI-II 81
Hypothesis Testing 87
Hypothesis 1 - Degree of Psychopathology. 87
Hypothesis 1 — Part 1, EDI Results 87
Summary of Hypothesis 1, Part 1 89
Hypothesis 1, Part 2 (MCMI-II Results). 90
Summary of Results on Hypothesis 1, Part 2. 94
Hypothesis 2 — Planned Comparisons Measuring Social Withdrawal. 95
Hypothesis 3 — Planned Comparisons Measuring Interpersonal Need-Satisfaction. 97
Summary of Hypothesis 2 and 3 100
Hypothesis 4 — Severity of Psychopathology 101
The Clinical Syndrome Scales. 102
The Severe Personality Pathology Scales 103
The Severe Syndrome Scales. 105
Summary of Hypothesis 4 107
Hypothesis 5 — Degree of Disordered Object Relations 111

TABLE OF CONTENTS CONTINUED

Summary of Hypothesis 6 112
Post Hoc Correlational Analyses 112

IV DISCUSSION 128

Brief Review of Theoretical Considerations and Study Findings 128
Comments on Hypothesis 1, 2, and 3 and Related Issues. . 134
Hypothesis 1 (Part 1) 134
Hypothesis 1 (Part 2) 136
Hypothesis 2. 143
Hypothesis 3. 144
Summary of Comments Related to Hypothesis 1, 2, and 3. . 147
Hypothesis 4. 148
Summary of Comments Related to Hypothesis 4. 154
Hypothesis 5. 155
Hypothesis 6. 156
Summary of Comments Related to Hypotheses 5 and 6. . . . 158
Post Hoc Correlational Analysis. 158
Primary Characteristics Found in Each Group. 162
Characteristics of the Obese Group. 163
Summary of Comments on the Obese 167
Characteristics of the Normal-Weight Bulimic Group. . 167
Summary of Comments on the Normal-Weight Bulimics. . . . 171
Characteristics of the Bulimic Anorexic Group 172
Summary of Comments on the Bulimic Anorexics 175
Characteristics of the Restricting Anorexic Group . . 175
Summary of Comments on the Restricting Anorexics 179
Treatment Implications 180
Summary. 183
Special Features of the Sample 183
The Eating Disorders Spectrum. 187
Concluding Statements and Recommendations for Further Research 191

Appendices — Page

A. PRIMARY SOURCE OF THERAPY BY GROUP. 196

B. MEAN WEIGHTS FOR FEMALES. 198

C. NUMBER OF SUBJECTS FROM EACH STATE/PROVINCE BY GROUP. . . . 200

D. FORMS 202

E. MCMI-II PERSONALITY STYLES. 210

F. MCMI-II CLINICAL SCALES 213

G. SUBSCALE ITEMS FROM EDI 216

TABLE OF CONTENTS CONTINUED

H. SUBSCALE ITEMS FROM BORT. 220

I. SUBJECT ADVERTISEMENTS. 227

J. REQUESTS FOR VOLUNTEERS 233

K. REFERRAL SOURCES OF SUBJECTS. 235

L. EXCLUDED QUESTIONNAIRE PACKETS. 237

M. RETURNED, UNUSED QUESTIONNAIRES 239

N. ANALYSIS OF COVARIANCE. 241

O. PERCENT OF HIGH SCORES ON PERSONALITY PATTERN SCALES OF MCMI-II 276

P. DESCRIPTIVE STATISTICS FOR MCMI-II BASE RATE SCALE SCORES . 278

Q. PATHOLOGICAL ELEVATIONS ON BORT ALIENATION AND INSECURE ATTACHMENT SUBSCALES. 283

R. RAW DATA. 285

REFERENCES 287

BIBLIOGRAPHY 313

VITA AUCTORIS. 321

LIST OF TABLES

Table		Page
1	DSM-III-R Diagnostic Criteria for Anorexia Nervosa.	4
2	DSM-III-R Diagnostic Criteria for Bulimia Nervosa	8
3	Treatment Data by Group	45
4	Summary of Analysis of Variance on Length of Eating Disorder with Group Membership as Source of Variation.	47
5	Summary of Analysis of Variance on Months in Treatment with Group Membership as Source of Variation.	48
6	Demographic Data by Group	49
7	DSM-III-R Criteria for Eating Disorders not Otherwise Specified	54
8	Summary of Analysis of Variance on Age with Group Membership as Source of Variation	56
9	Descriptive Statistics for Bell Object Relations Test Subscales by Group.	72
10	Descriptive Statistics for Eating Disorder Inventory Subscales by Group.	73
11	Descriptive Statistics for Millon Clinical Multiaxial Inventory-II Scales by Group.	75
12	Summary of Analysis of Variance on Bell Object Relations Test with Group Membership as Source of Variation	82
13	Summary of Analysis of Variance on Eating Disorder Inventory with Group Membership as Source of Variation. . .	83
14	Analysis of Analysis of Variance on Millon Clinical Multiaxial Inventory-II with Group Membership as Source of Variation.	84
15	Results of Planned Comparisons Between the Restricting Anorexic Group and the Bulimic Groups for Selected Scales of the Millon Clinical Multiaxial Inventory-II . . .	96
16	Results of Planned Comparisons Between the Bulimic Groups and the Restricting Anorexic Group for Selected Scales of the Millon Clinical Multiaxial Inventory-II	99

LIST OF TABLES CONTINUED

Table		Page
17	Percent of Individuals Scoring 75 or Over on Clinical Syndrome Scales on Millon Clinical Multiaxial Inventory-II by Group	104
18	Percent of Individuals Scoring 75 or Over on Severe Personality Pathology Scales of Millon Clinical Multiaxial Inventory-II by Group	106
19	Percent of Individuals Scoring 75 or Over on Severe Syndrome Scales of Millon Clinical Multiaxial Inventory-II by Group.	108
20	Percent of Individuals Scoring in Pathological Range on Bell Object Relations Test.	113
21	Correlations Between Scales of the Bell Object Relations Test and Length of Eating Disorder.	115
22	Correlations Between Subscales of the Eating Disorder Inventory and Length of Eating Disorder	117
23	Correlations Between Scales of the Millon Clinical Multiaxial Inventory-II and Length of Eating Disorder . . .	118
24	Correlations Between Scales of the Bell Object Relations Test and Length of Eating Disorder.	122
25	Correlations Between Subscales of the Eating Disorder Inventory and Length of Treatment	124
26	Correlations Between Scales of the Millon Clinical Multiaxial Inventory-II and Length of Treatment	125

LIST OF FIGURES

Figure		Page
1	A Spectrum of Anorexic Concern	22
2	Chronicity of Eating Disorder by Group	43
3	Mean Scores on Eating Disorder Inventory by Group.	53

CHAPTER I

INTRODUCTION

In North America, since the 1950s and 1960s, with food being more abundant than in earlier decades, a population of women has arisen who, in the words of Boskind-White and White (1983):

> spend inordinate amounts of time obsessing about food and their bodies and have little time and energy to grow, pursue goals, and develop qualities necessary for psychological survival in today's changing society (p. 114).

These women suffer from eating-disorders which take many different forms but are characterized by a number of psychological and behavioral traits and fall into one or two general categories, anorexia nervosa and bulimia nervosa.

Although both anorexia nervosa and bulimia nervosa also exist in males, since the incidence is much less and subjects are hard to find, this study focuses on eating disorders in females. For a discussion of anorexia nervosa among males, the reader is referred to Anderson, 1985; Crisp, 1983; Garfinkel and Garner, 1983; Garner, Garfinkel, and Olmsted, 1983; Muni-Brander and Lachenmeyer, 1986; Vandereycten and Meerman, 1984; and Wilson, 1982. For a discussion of bulimia in males, the reader is referred to Fairburn and Cooper, 1984; Mitchell and Goff, 1984; Turnbull, Freeman, Barry, and Annandale, 1987; and Schneider and Agras, 1987. Since this study focuses on eating-disordered females, the use of the feminine form of the pronoun will be used when referring

to bulimics and anorexics.

Hilda Bruch (1962) was the first modern therapist and researcher to thoroughly investigate disordered eating that occurred because of psychological rather than physiological reasons. She specialized in the treatment of anorexia nervosa, a mental disorder characterized by the refusal to eat. "Anorexia," which means loss of appetite, can occur in certain physical illnesses, but in anorexia nervosa there is not usually a true loss of appetite. Failure to eat occurs because of emotional conflicts, hence the use of the word "nervosa."

After working extensively with many types of anorexics, Bruch (1973) identified some important differences between two forms of anorexia, primary and secondary anorexia nervosa. In primary anorexia nervosa the individuals derive pleasure from self-imposed starvation and they fear fatness and actively pursue thinness. In secondary anorexia nervosa the patients are reluctant to eat because of digestive concerns, depression, or psychosis. There might be a true loss of appetite as the word "anorexia" implies. With primary anorexia nervosa there is not a loss of appetite until the later stages of starvation. Bruch (1973) pointed out that in primary anorexia nervosa the failure to eat and its associated weight loss is a "late feature in the disease, secondary to the underlying personality disturbance" (p. 251). The underlying personality disturbance first identified by Bruch (1962) consisted of the following three factors:

1. Body image disturbance: a disturbance of delusional proportions in the body image and body concept.
2. Faulty interoceptive awareness: a disturbance in the

accuracy of the perception or cognitive interpretation of stimuli arising in the body, with failure to recognize signs of nutritional need as the most pronounced deficiency.

3. Sense of ineffectiveness: a paralyzing sense of ineffectiveness which pervades all thinking and activities (Bruch, 1973, pp. 251-254).

Briefly, body image disturbance involves "error in cognitive awareness of the bodily self," (Bruch, 1973, p. 89) and includes deficits in the ability to recognize internal and external stimuli and to realistically assess body shape and size. The most striking feature of body image disturbance is the primary anorexic's denial that her emaciated body is abnormally thin, and her insistence that it is just right or too fat. Closely related to this body image disturbance is the faulty interoceptive awareness. Faulty interoceptive awareness includes difficulties identifying and labeling emotions as well as hunger states. One striking example which occurs in some primary anorexics as well as in bulimics is the stuffing of food into one's mouth when a person is not even hungry. The third psychological trait, the sense of ineffectiveness, is also often referred to as a lack of autonomy, or a lack of a definitive sense of self which is free to make choices.

The most recent, official list of symptoms found in anorexia nervosa occurs in the revised, third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III-R) (APA, 1987). Although this list (see Table 1) does not include all of Bruch's psychological characteristics, researchers in eating disorders agree

Table 1

DSM-III-R Diagnostic Criteria for Anorexia Nervosa

A. Refusal to maintain body weight over a minimal normal weight for age and height, for example, weight loss leading to maintenance of body weight 15% below that expected; or failure to make expected weight gain during period of growth, leading to body weight 15% below that expected.

B. Intense fear of gaining weight or becoming fat, even though underweight.

C. Disturbance in the way in which one's body weight, size, or shape is experienced, for example, the person claims to "feel fat" even when emaciated, believes that one area of the body is "too fat" even when obviously underweight.

D. In females, absence of at least three consecutive menstrual cycles when otherwise expected to occur (primary or secondary amenorrhea). (A woman is considered to have amenorrhea if her periods occur only following hormone, e.g., estrogen, administration.)

Diagnostic and Statistical Manual of Mental Disorders, 3rd ed., revised (1987), p. 67.

upon the importance of these psychological traits (Andersen, 1983; Johnson & Connors, 1987). The DSM-III-R criteria include the refusal to weigh more than a minimum amount (usually 15% or less of what is expected for one's age and height), an intense fear of becoming fat, body image disturbance, and in females, amenorrhea, the absence of three consecutive menstrual cycles in those who normally menstruate. One of the reasons the list is so short is that there has been a great deal of controversy over which criteria are necessary for the diagnosis of anorexia nervosa. This confusion over which criteria are important in the diagnosis of anorexia nervosa is not a new phenomenon.

In early medical journals, Morton (1969), Whytt (1767), Laseque (1873), Huchard (1883), la Tourette (1895), Janet (1903), and Gaukler (1913), doctors from England, France, and Germany, all made reference to what are now called primary and secondary anorexia nervosa (Dally & Gomez, 1969; Silverman, 1983; Sours, 1980). Numerous causes were suggested, including depression, phobic anxiety, hysteria, psychosis, family pressures, and pituitary or gastrointestinal dysfunctions. This resulted in a good deal of confusion and arguments over appropriate treatment (Sours, 1980).

In order to decrease the amount of confusion, attempts were made to subdivide the types of patients who voluntarily starved themselves into groups based upon distinguishing characteristics (Janet in 1903, la Tourette, in 1885, and Gaukler in 1913) (Sours, 1980). Attempts at classification have continued into modern times (Bruch, 1973; Dally, 1969; Feighner, Robins, Guse, Woodruff, Winokur, & Monoz, 1972; Sours, 1980; Strober, 1983; Vigersky, 1977).

One of the major difficulties in arriving at a definitive list of symptoms commonly found in anorexia nervosa in recent years occurred because of the emergence of a new form of the illness in the 1940s (Casper, 1980). Although many different psychological traits had been associated with anorexia nervosa during the 17th to 19th centuries, the same basic behaviors were mentioned: food refusal, excessive exercising, and occasionally, vomiting. Voracious overeating was only rarely found among anorexics (Casper, 1940). In 1944 Binswanger published an account of his patient, "Ellen West," who began to gorge herself with food, rapidly becoming obese after having partially recovered from anorexia nervosa. The account of Ellen West was followed by other case histories of anorexic patients who had become bulimic, rapidly stuffing themselves with large quantities of food in short periods of time (Bond, 1949; Nemiah, 1950; Nicole, 1939). Before this time, food gorging or bulimia was associated with certain physical illnesses (Beumont, 1988) or with obesity (Stunkard, 1959). After this time, not only did voracious overeating begin to appear more frequently among anorexics (Beumont, Booth, Abraham, Griffiths, & Turner, 1983; Hsu, Crisp, & Harding, 1979; Casper, Eckert, Halmi, Goldberg, & Davis, 1980), it also began to appear in normal-weight individuals without a history of anorexia nervosa (Fairburn & Cooper, 1982; Johnson, Stuckey, Lewis, & Schwartz, 1982; Pyle, Mitchell, & Ekert, 1981; Wermuth, 1977). Some considered bulimia to be an associated feature of anorexia (Feighner et al., 1980) and others, a subtype of anorexia nervosa or a related disorder (Garfinkel, Moldofsky, & Garner, 1980; Thomas, 1987).

In 1987 the DSM-III-R (APA) criteria for bulimia nervosa were

established (see Table 2). This list includes these symptoms: repeated binges which occur at least twice a week over a period of at least three months, feelings of being out of control while eating, and attempts to prevent weight gain by any of a number of methods (vomiting, laxative abuse, etc.). There is no mention of any particular weight a bulimic must be, but the overconcern with weight and body size is an important psychological criterion of bulimia.

Even with the establishment of separate criteria for anorexia nervosa and bulimia nervosa, confusion remains. Part of this confusion exists because of the multitudinous combinations of eating-disordered behaviors which exist and the crossing over from one type of eating disorder to another (Andersen, 1983). There are anorexics who alternate their periods of starvation with bingeing and purging. There are anorexics who starve most of the time, never bingeing at all, but vomit after they do eat. There are anorexics who only restrict their food intake, but never purge. There are individuals who alternate periods of starvation with bingeing, but who never purge. There are individuals without a history of anorexia nervosa who begin to binge and purge, but never fast and others who begin to binge and purge, but later begin to fast. There are individuals who binge and starve, but never purge. Anorexics become bulimic and bulimics become anorexics, although the latter is less frequent (Andersen, 1983).

Personality Characteristics Among the Eating-disordered

Is bulimia nervosa an end stage of primary anorexia nervosa? Is it a separate entity or a subtype? Researchers have tried to answer

Table 2

DSM-III-R Diagnostic Criteria for Bulimia Nervosa

A. Recurrent episodes of binge eating (rapid consumption of a large amount of food in a discrete period of time).

B. A feeling of lack of control over eating behavior during the eating binges.

C. The person regularly engages in either self-induced vomiting, use of laxatives or diuretics, strict dieting or fasting, or vigorous exercise in order to prevent weight gain.

D. A minimum average of two binge eating episodes a week for at least three months.

E. Persistent overconcern with body shape and weight.

Diagnostic and Statistical Manual of Mental Disorders, 3rd ed., revised (1987). American Psychiatric Association, pp. 68-69.

these questions by examining not only the behaviors but also the personality characteristics present in each eating-disordered subgroup. The purpose of such research is to try to discover if the traits in various groups are more similar to or different from each other. There are many problems with the existing literature concerning personality characteristics among the eating-disordered. Researchers have differed in the ways they divided eating-disordered subjects into groups and in the terms they used to label each group. Different types of control groups were used and different combinations of eating-disordered subjects were compared. Some studies used outpatients, others inpatients, still others used those not in treatment. Because of this lack of consistency in terminology, populations utilized, and ways of subdividing the eating-disordered into groups, the following discussion may appear disjointed. This is a reflection of the present state of the literature.

One way of dividing the eating-disordered into groups is to make a distinction between restricting anorexics ("those who lose weight by rigidly restricting their food intake," (Garner, Garfinkel, & O'Shaughnessy, 1985, p. 581) and bulimic anorexics ("those whose stringent attempts to limit intake are interrupted by episodes of bulimia," p. 581). Compared to non-eating-disordered controls, Strauss and Ryan (1987) found that both anorexic groups were characterized by poorer self-concepts, more pathological object relationships, and more disturbed family interactions than controls. Restricting anorexics, however, appeared to have a greater sense of impersonal causality than either bulimic anorexics or controls.

In the following two studies, instead of using normal controls, a third group, normal-weight bulimics (those who binge and purge, but are of normal weight and have no history of anorexia nervosa) were used as a comparison group. Norman and Herzog (1983) found that the Minnesota Multiphasic Personality Inventory (MMPI) (Hathaway & McKinley, 1967) profiles of all three groups were similar, with "the depression scale being most salient to the anorexic groups and the psychopathic deviant scale most salient to the bulimic groups" (p. 43). All three groups appeared highly symptomatic. All three groups appeared depressed and alienated, but differences emerged too. With the highest peaks on 2 and 8, the restricting anorexics appeared withdrawn, anxious, depressed, alienated, and agitated. They complained of fatigue and weakness, feared loss of control, and tended to avoid close interpersonal relationships. People with the 2-8 profile are often psychotic and the prognosis for psychotherapy is poor. Bulimic anorexics, with 2-4 and 2-4-8 profiles, were similar to restricting anorexics in that they were also depressed and felt alienated. However, they also evidenced a need for affection and had histories of underachievement, unpredictability, and poor adjustment. People with such profiles often have suicidal thoughts and sexual conflicts. Their modal personality type is schizoid with depressive reaction. The normal-weight bulimics, with the 2-4-8 profile and seven scales above 70, were seen to be impulsive, depressed, full of guilt, and lacking in frustration tolerance.

In the second study, using a series of standardized psychometric measures, Garner, Garfinkel, and O'Shaughnessy (1985) found that

bulimic anorexics and normal-weight bulimics resembled each other on most variables and were more like one another than either were like the restricting anorexics. Both bulimic groups binged with equal frequency, ate about the same quantities of food, were similar in their frequency of vomiting and in laxative and/or diuretic abuse.

The presence of an impulse disorder was suggested because both bulimic groups were more likely to have a history of stealing, drug abuse, self-mutilation, and suicide attempts than the restricting anorexics and a similar proportion of each group engaged in three or more impulse-related behaviors. They also exhibited more lability of mood than did the restricting anorexics. Crisp (1981, 1982) found similar traits in his group engaged in the "abnormal normal weight control syndrome."

Other studies have also stressed the presence of high levels of psychopathology among normal-weight bulimics. Weiss and Ebert (1983) found that a group of normal-weight bulimics had higher levels of psychopathology and were more impulsive than normal-weight controls. They showed greater levels of depression, anxiety, and obsessive-compulsive traits than controls, and a greater tendency to have an external rather than an internal locus of control. The traits appeared to be enduring and a function of factors other than childhood or adult stressors.

Based on the Rorschach (1942) profiles of 57 normal-weight bulimic women, Weisberg, Norman, and Herzog (1987) presented the profile of a typical normal-weight bulimic. They suggested the bulimic feels overwhelmed and unable to cope with distress. She is

threatened by strong affects which she attempts to avoid. Failing to do so, she either discharges her feelings impulsively or feels overcome by depression. Her distress is sometimes expressed in somatic complaints. She has poor problem-solving skills, an inconsistent coping style, and is prone to being externally controlled. Her perceptions are idiosyncratic and her self-organization fragile.

However, there is some evidence to suggest that normal-weight bulimics are healthier than bulimic anorexics. In a study comparing a "bulimic with weight loss" group (which will henceforth be referred to as the bulimic anorexic group) and a non-obese "bulimic without weight loss" group (which will be referred to as the normal weight bulimic group), the latter group appeared less pathological. The bulimic anorexics showed more borderline symptomatology and associated impulse control problems in their Rorschach responses than did the normal-weight bulimic group (Radant, 1985). The bulimic anorexics showed more signs of "cognitive slippage" than the other eating-disorder group. The bulimic anorexics and the borderline personality disordered patients differed from the normal-weight bulimics in that both reported experiencing more distress and engaging in similar levels of self-destructive behavior.

In another study comparing non-anorexic bulimics to data on restricting and bulimic anorexics, depressed neurotics, and normal controls from a number of independent samples, the non-anorexic-bulimics (normal-weight bulimics) were relatively symptom-free using a standard psychiatric symptom index and had fewer symptoms than the other eating-disordered groups (Johnson et al., 1982). Boskind-Lodahl

(1979) also stated that the group of normal-weight bulimics she worked with were better adjusted than the restricting anorexics and the other kinds of bulimics with whom she had worked. There appears to be some difference between normal-weight bulimics with a history of anorexia as opposed to those without such a history. Mickalide and Andersen (1985) found that normal-weight bulimics without a history of anorexia nervosa, though equally pathological in other ways, were less depressed than normal-weight bulimics with a history of anorexia nervosa. Thompson (1988), using two standardized measures of eating disorders and a depression scale, found little difference among underweight bulimics, normal-weight bulimics with a history of being underweight, and normal-weight bulimics without such a history. (No information is given about whether or not any of the subjects had been previously diagnosed anorexic.)

Another way of dividing types of eating-disordered individuals into groups is by making a distinction between bulimics who binge and purge and those who only binge. Comparing purging and non-purging bulimics, Grace, Jacobson, and Fullager (1987) found both groups to be quite similar. Both groups were characterized by low self-esteem, high levels of anxiety, and an external locus of control. Although for these subjects purging did not appear to be a pathognomic sign, in a study by Prather and Williamson (1988) binge-purgers showed higher levels of psychopathology than binge-eaters. Both bulimic groups had characteristics common to obsessive-compulsive neurotics. In another study comparing bingers with those who binge and purge, Nagelberg, Hale, and Ware (1984) found neither group to be highly maladjusted.

However, the binge-purgers had less will control and less regard for social demands and were more impetuous and less considerate and painstaking. Two other studies have suggested purging bulimics are more pathological than non-purging bulimics (Viesselman & Roig, 1985; Willmuth, Leitenberg, Rosen, Cado, 1988). Both studies found the purging-bulimics to be more depressed (Viesselman et al., 1985; Willmuth et al., 1988) and the former also found them to be more suicidal.

In a study comparing anorexics, bulimics, and morbidly obese, the groups had quite similar MMPI profiles with elevations on 1 (Hs), 2(D), and 4 (Pd) (Scott & Borofino, 1986). The common core suggested by elevations on 2(D) and 4(Pd) presents a "chronic clinical picture of immature, passive-aggressive, self-defeating individuals who are likely to engage in struggles of interpersonal control" (p. 712). The elevation on 1(Hs) suggests that members in all three types of eating disorders tended to bind their anxiety and displace it onto somatic concerns. The MMPI profiles found in this study were similar to those found in two other studies of anorexics. The common core, 2-4 profile, was also evident (Skoog, Andersen, & Laufer, 1984; Vigersky, Loriaux, Andersen, Mecklenburg, & Vaitukaitis, 1986. Since the 2-4 code is commonly found in distressed individuals with all manner of symptomatology (Small, Madero, Gross, Teagno, Leib, & Ebert, 1981), it is important to examine studies which use other kinds of personality measures.

Using the Rorschach and Wechsler Adult Intelligence Scale (WAIS) (Wechsler, 1955), Small, Madero, Gross, Teagno, Leib, and Ebert (1982)

found the borderline personality pattern of intact and well-retained Wechsler performance and poor Rorschach performance in a group of 27 hospitalized anorexics. In another study using the Rorschach, subtests of the Wechsler and the Diagnostic Inventory for Borderlines (DIB) (Gunderson, 1977), Bram, Eger, and Halmi (1982) found that four of the six hospitalized anorexics examined showed signs of diagnostic personality disorders. Using DSM-III criteria, two were borderline, one schizoid, and one histrionic. Protocols were characterized by peculiar verbalizations, looseness of association, and loss of distance. It is interesting to note that borderline tendencies occurred more often in the protocols of vomiting anorexics than in those of non-vomiting anorexics.

Other studies using the Rorschach with inpatient anorexics have found poor reality testing and psychotic trends (Palazzoli, 1971; Roland, 1970; Sugarman, Quinlan, & Devenis, 1982) and the presence of boundary disturbance (Strober & Goldenberg, 1981; Sugarman et al., 1982). Rorschach responses with heightened barrier scores, contamination responses, and a strong tendency toward specificity and affective elaboration also have suggested that some eating-disordered individuals have problems maintaining self-other boundaries.

Based on clinical interviews, personality disorders were found in two types of hospitalized anorexics (Piran, Lerner, Garfinkel, Kennedy, & Brouillette, 1988). Ten percent of the restricting anorexics and 68.4% of the bulimic anorexics evidenced the presence of histrionic, antisocial, or borderline personality disorders. Most restricting anorexics who showed evidence of personality disorders fulfilled the

criteria for avoidant or other Cluster III, DSM-III personality disorders, suggesting the use of avoidance, withdrawal, and inhibition of action. Most personality-disordered bulimic anorexics fulfilled criteria for borderline or other cluster II diagnoses suggesting an impulsive discharge of affect. On the Diagnostic Inventory for Borderlines (DIB) (Gunderson, Kolb, & Austin, 1981), a comparable number in each group displayed borderline features; the only difference occurred among the bulimic anorexics who scored higher on the impulse action scale.

A number of studies using standardized projective measures, personality inventories, and clinical interviews have noted the presence of personality disorders among bulimics. Using clinical interviews, Gwirtsman, Roy-Byrne, Yager, and Gerner (1983) found that 44% of the bulimics involved in a neuroendocrine study met DSM-III criteria for borderline personality disorders. Levin and Hyler (1986), using comprehensive personal interviews conducted by two psychiatrists, found 15 out of 24 normal-weight bulimics studied met the full criteria for at least one personality disorder, five showed characteristics of more than one, two met the criteria for mixed personality disorder, and eight others showed significant traits. The largest group, 11 subjects, met the criteria for either or both histrionic or borderline personality disorders, and four others showed significant traits of these two types. The remaining subjects exhibiting pathological traits showed a mixture of compulsive, avoidant, and passive-aggressive styles and appeared over-controlled in non-eating-related activities. A relationship was found between type of personality pathology and

eating-disorder history, frequency of binges, or weight fluctuations. In another study (Cooper, Morrison, Bigman, Abramowitz, Blunden, Nassi, & Krener, 1988) a positive correlation was found between the presence of borderline personality disorder and symptom severity in bulimic women.

Yates, Sieleni, Reich, and Brass (1989) found the incidence of Cluster B (histrionic, narcissistic, antisocial, and borderline) and Cluster C (avoidant, dependent, compulsive, and passive-aggressive) personality disorders was significantly higher in a group of 30 females meeting the criteria for bulimia nervosa than in a matched group of non-eating-disordered women. Fifty-three percent of the bulimics met the criteria for at least one DSM-III personality disorder using clinical interviews and a standardized interview schedule. No information was provided about any possible relationships between presence of personality disorder and level of symptom severity and the bulimics were not divided into subtypes.

Johnson, Tobin, and Enright (in press) found that 41% out of a group of 95 bulimics seen consecutively at intake had borderline personality disorders as measured by the Borderline Syndrome Index (BSI) (Conte, Plutchik, Karasu, & Jerrett, 1980). Twenty percent of the remaining eating-disordered individuals showed serious character pathology. Although there were few differences between the borderline and non-borderline groups of bulimics in terms of symptomatic eating-disordered behavior and attitudes, the borderline group appeared more disturbed psychiatrically and less well-adjusted socially. In another study in which the BSI was used, a continuum of severity was suggested

as the most extreme scores were held by the bulimics, the next extreme by the anorexics, and the least extreme, by the obese (Lepkowsky, 1987).

A similar continuum was found by comparing restrictive bulimic, purging bulimic, bingeing, and normal control groups on two scales of the Bell Object Relations Test (BORT, 1983). The first was the Insecure Attachment subscale which identifies ambivalent interpersonal relations and fear of object loss. The second was the Egocentricity subscale which measures suspicious and manipulative attitudes toward others. A linear increase in group means and in the proportion of high scoring subjects was found which paralleled Katzman and Wolcik's (1984) ranking of eating disorder severity from normal eaters to binge eaters, to restricters, to purgers (Becker, Bell, & Billington, 1986). For this population of college students it appeared purging bulimics were more disturbed than restricting bulimics and that both groups had difficulties with object relations.

In studies using the Millon Clinical Multiaxial Inventory (MCMI) (Millon, 1973) to assess DSM-III Axis I and Axis II syndromes in bulimics and anorexics, similarities and differences were found between groups in types and level of psychopathology. Although both anorexics and bulimics exhibited high levels of anxiety, depression, and a tendency toward somatization, anorexics scored higher on all Axis I syndromes (Tracy, Norman, & Weisberg, 1987). Ninety percent of the anorexics and 57% of the bulimics exceeded MCMI cut-off points for borderline and schizotypal personality disorders. Anorexics had relatively higher scores on the schizoid and avoidant scales,

suggesting the presence of interpersonal withdrawal and the renunciation of need-satisfaction. Bulimics, on the other hand, scored relatively higher on the histrionic and narcissistic scales. It appears they tended to actively seek need-satisfaction "wavering between doing so via an actively dependent style and one of more narcissistic self-absorption" (National Computer Systems, Inc., 1987, p. 196). In another study using the MCMI, outpatient anorexics scored significantly higher than bulimics on the compulsive-conforming scale, but significantly lower on the histrionic-gregarious scale (Lepkowsky, 1987), again suggesting a difference between groups in terms of emotional constriction and tendency to gratify needs. In a related study using inpatients, anorexics evidenced a schizoid tendency and more signs of depersonalization, compulsivity and psychotic thinking than the bulimics who were characterized by borderline symptomatology.

As the above review of the literature suggests, there is conflicting evidence about the relationship between specific eating-disordered symptoms and type and level of psychopathology. The results of some research suggest that there is a sort of continuum with some eating-disordered behaviors being associated with greater psychopathology than others or certain kinds of pathology being found more often in one kind of eating disorder than another (Becker et al., 1986; Cooper et al., 1988; Crisp, 1981, 1982; Garfinkel et al., 1985; Garner et al, 1985a, 1985b; Johnson et al., 1982; Lepkowsky, 1987; Mickalide & Andersen, 1985; Nagelberg et al., 1984; Piran et al., 1988; Prather & Williamson, 1988; Radant, 1985; Strauss & Ryan, 1987; Tracy et al., 1987; Visselman & Roig, 1985; Willmuth et al., 1988). The

results of other studies suggest there are a variety of types and levels of psychopathology within each eating-disordered group (Grace et al., 1987; Gwirtsman et al, 1983; Norman & Herzog, 1983; Skoog et al., 1984; Scott & Borofino, 1986; Thompson, 1988; Vigersky et al., 1986). There is also some evidence to suggest the existence of a population of relatively well-adjusted eating-disordered individuals (Lacey, 1982; Levin & Hyler, 1986; Johnson et al., 1982) and a population of seriously emotionally-impaired eating-disordered individuals (Bruch, 1973; Ferguson & Damluji, 1988; Lepkowsky, 1987; Small et al., 1981; Small et al., 1982; Sours, 1982).

The Spectrum Concept of Eating Disorders

The spectrum concept of eating disorders attempts to reflect the great diversity of disordered eating behaviors that exist and the variety of types of psychopathology that are associated with each subtype of eating disorder. A spectrum is a "closely related set of disorders with one or more fundamental unifying features" (Andersen, 1983, p. 15). A spectrum is not a continuum on which the types of eating disorders are ranked in order of the severity of psychopathology associated with each. It allows for some overlapping of personality characteristics across all subgroups while also reflecting the diversity of clusters of disordered dietary behavior. In the case of eating disorders, the most important shared symptoms are a fear of becoming fat and the drive for thinness (Andersen, 1983). The idea of a continuum, on the other hand, suggests that the severity of psychological deficits is directly related to the severity of

disordered dietary habits (Squires, 1983).

Although the spectrum concept of eating-disorders has been posited by many researchers (Andersen, 1983; Johnson & Connors, 1987; Lerner, 1986; Masterson, 1977; Mitchell, Pyle, Hatsukami, Halmi, & Eckert, 1986; Strober, 1983; Swift & Stern, 1982; Vandereycken, 1982), only a few have discussed the form this spectrum might take. Masterson (1977), Swift and Stern (1982), and Strober (1983), have presented a rather extensive discussion along with examples of what form an anorexic spectrum might take. Johnson and Connors (1987) have discussed an eating disorders spectrum which includes anorexics and bulimics.

Swift and Stern (1982) felt that anorexia nervosa exists in a heterogeneous psychodynamically diverse group with no direct one-to-one relationship between level of psychopathology and eating disorder symptoms. Within this "Spectrum of Anorexic Concern" Swift and Stern (1982) identified four general groups (see Figure 1). The majority of adolescent females who are concerned about weight-related matters fit into Group A. A smaller group who diet regularly and are more weight-conscious fit into Group B. Still another, smaller number are considered "mild" anorexics, females who can be treated successfully on an outpatient basis (Group C). The last group, Group D, is the smallest and is made up of classical hospitalized anorexics. Within this group are: the borderline anorexic, the empty, understructured anorexic (henceforth referred to as the empty anorexic), and the emotionally conflicted, identity-confused anorexic (henceforth referred to as the identity-confused anorexic). The borderline anorexics, who

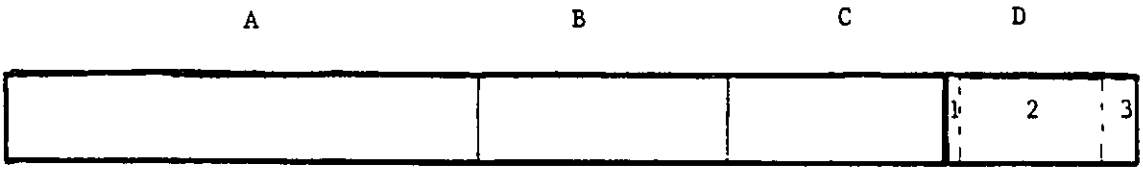

Figure 1. A Spectrum of Anorexic Concern

Legend:

A = majority of adolescent females concerned about caloric intake, weight, figure, etc.

B = substantial minority of adolescent females who diet regularly and are exceptionally weight/figure conscious. Many are "restrained" eaters.

C = "mild" anorexics

D = classical, hospitalized anorexics

1 = borderline anorexic

2 = empty, understructured anorexic (classical, primary anorexic)

3 = emotionally conflicted, identity-confused anorexic (essentially neurotic)

Adapted from Swift and Stern, 1982, p. 22.

make up only 10% of primary anorexics, are thought to experience brief psychotic episodes and to have a poor long-term prognosis. The empty anorexics are thought to be psychically immature, dependent, and lacking in a sense of individuality and in the ability to appropriately express aggression. Their prognosis is better. The identity-confused anorexics are thought to be neurotic adolescents who are more able to give up their anorexic symptoms and deal with the real issues, identity confusion and the conflict between their need to express aggressive feelings and the guilt experienced when they do. They have the ability to learn to appropriately express anger and to separate from their parents with the help of therapy.

Masterson (1977) likewise contended that the anorexic syndrome "is not specific to any one diagnostic category" (p. 476). He posited the existence of three kinds of anorexics, each with a different underlying personality structure. In the most severely impaired category are the schizophrenics, with impaired reality testing and confused self-other boundaries. In the next group are those with a borderline personality organization. They function at a higher level than do the psychotics, but they still have difficulty with reality testing and separation-individuation. The latter results in impaired interpersonal relationships and therapy with such individuals is long term and specialized. In the third group are the psycho-neurotics, those with a firmer sense of self. They are amenable to classical psychoanalytic therapy.

Strober (1983) also divided anorexics into three types from the highest functioning group which is the most affectively stable and the

least impulsive to the next highest group made up of more shy, isolated, rigid, and obsessional individuals, to the lowest functioning group which is the most temperamental, moody, impulsive, and dependent. In his classification system Strober did not specifically deal with the bulimia-restricter distinction because he felt it "obfuscates other important etiologic, clinical, and prognostic diversities among patients" (p. 186), but he did find that those in his third group, those who were the most pathological, tended to binge and purge frequently. Strober (1983) concluded that "anorexia nervosa represents a final common syndromal pathway for diverse etiologies, developing in the context of a broad spectrum of personality dynamics" (p. 195).

Although other researchers have posited the existence of a bulimic segment within the eating-disorders spectrum (Aronson, 1986; Prather & Williamson, 1988; Thompson et al., 1987), only one research group included both anorexics and bulimics in the same eating disorders spectrum. According to Johnson and Connor's (1987) conceptualization of the eating-disorders spectrum, eating disorders are multiply-determined and occur in people at all three levels of personality organization: neurotic, character-disordered, and psychotic. Johnson and Connors (1987) identified two types of character-disordered anorexics and bulimics. The first type, the borderline anorexics and bulimics are thought to be the more seriously impaired because their character pathology is assumed to result from an earlier developmental arrest than occurred in the second group, the false self/narcissistic anorexics and bulimics. The borderline anorexics and bulimics are

thought to have significant ego impairments resulting in difficulties with self-regulation. They are prone to regressions during which their affects are quite labile and their inner/outer, self/other boundaries can break down. The false self/narcissistic anorexics and bulimics, on the other hand, try to compensate for feelings of ineffectiveness by pretending to be mature, competent, responsible, and self-assured. They are not prone to the breakdown of boundaries, but they are dependent on others for help with self-regulation and for self-esteem.

Brief Discussion of Object Relations Theory as It Relates to Eating Disorders

In three of the eating-disorders spectrums mentioned above, references were made to the three levels of development found in the eating-disordered: neurotic, character-disordered (borderline or narcissistic/false-self), and psychotic. An important feature of the level of development a person reaches is the level of object relations development she has attained. Object relations are based on internal representations of the self and others as whole, separate, and dependable. Object relations emerge out of interactions between the child and her primary caregiver. During healthy development the primary caregiver at first neutralizes tension, provides organization, and helps encourage and maintain the child's sense of importance. Later the child's memory of these actions can perform some of the same tasks, and much later, the child takes on the functions herself, finding ways to comfort herself, reduce tension, and maintain a

cohesive and positive sense of herself, while organizing ways to meet her needs for companionship, etc. At the same time, if the primary caregiver responds appropriately to her child's communications, the child develops trust in others. Object relations theory has grown up out of the developmental theory of Margaret Mahler (Mahler, 1974; Mahler, Pine, & Bergman, 1975).

After observing thousands of normal youngsters interacting with their primary caregivers, Margaret Mahler (1975) identified a psychological phenomenon which she called separation-individuation. Two related processes which occur at the same time, but not at the same rate, are involved. The first of these, separation, involves the development of intrapsychic autonomy, perception, memory, cognition, and reality testing. The second process, individuation, involves the development of differentiation, distancing, boundary formation, and disengagement from the primary caregiver. If separation-individuation proceeds normally, the child develops the capacity for self-regulation, including the abilities mentioned above (tension reduction, etc.) (Johnson & Connors, 1987; Mahler et al., 1975). The four major stages of this theory are outlined below:

1. Autistic--during first month of life when there is no distinction between the self and others.
2. Symbiotic--during second to fifth months when the earliest object relations emerge while the infant begins to differentiate herself from the object.
3. Separation-individuation--spanning the time from about the fifth to the 36th month when the child develops autonomy and

a sense of others as separate, reliable individuals.

4. On-the-way-to-object-constancy--at about three years, when child achieves individuality and object constancy.

If the child's growth is interrupted or arrested at any point during this sequential process, it interferes with the formation of healthy object relationships and the person becomes neurotic, character-disordered, or psychotic, depending upon when the disruption occurs. The following is a brief discussion of the effect of developmental arrests occurring at different stages accompanied by a description or example of the type of eating-disorder that would develop in individuals with the corresponding levels of development. It is acknowledged that these are not the only possible types of developmental arrest and that there are many other factors involved in the development of an eating disorder besides arrested development and its associated disordered object relations.

If the arrest occurs during the symbiotic phase, the self- and object representations remain fused and the anorexic's ego defenses are those of the psychotic: splitting and projection. In addition, the individual will have poor ego boundaries and reality testing, and will often have delusions and hallucinations. Such a person who develops an eating disorder is schizophrenic (Masterson, 1977). Masterson (1977), Swift and Stern (1982), and Sours (1980) all mentioned the psychotic individual with an eating disorder. Bruch (1973) considered the psychotic anorexic to have a form of <u>secondary anorexia nervosa</u>. Johnson and Connors (1987) discussed psychotic anorexics and bulimics and pointed out how the psychotic bulimic differs from the higher

functioning bulimics:

> Psychotic patients with bulimic symptoms most often do not express a drive for thinness, morbid fear of fat, or self-depreciating thoughts following a binge episode. If they do express distorted thinking regarding food or their bodies, it is part of a larger psychotic organization and is not circumscribed as with most anorexic and bulimic patients (p. 103).

If the arrest occurs during the separation-individuation subphase, especially during rapprochement, the self- and object representations are separate but split into good and bad self- and object representations (Masterson, 1977). The defenses used are still primitive, but not as primitive as those of the psychotic. They include splitting, clinging, avoidance, denial, projection, and acting out. Ego boundaries and reality testing are stronger than in the psychotic, but not as strong as in the neurotic (Masterson, 1981). These are features of a borderline character structure (Kernberg, 1985). According to psychoanalytic theory, a borderline person's level of personality organization lies somewhere between that seen in neurotics and that seen in psychotics. Within this structure there are a variety of manifestations and degrees to which individuals exhibit both neurotic and psychotic characteristics (Kernberg, 1980; Meissner, 1984). A person with a borderline personality structure may use a variety of defensive patterns including obsessive-compulsive and avoidant and may fit the criteria for any number of DSM-III-R personality disorders including the histrionic, obsessive-compulsive, narcissistic, borderline, passive-aggressive, avoidant, self-defeating (masochistic), and schizoid disorders. Therefore, to avoid the possibility that use of the term borderline will be taken to refer

simply to a borderline personality disorder rather than to borderline personality structure, the term "character-disordered" will be used to refer to individuals whose character structure lies somewhere between what would be seen in neurosis and psychosis. (For a further discussion of the confusion which surrounds the concept of "borderline" the reader is referred to Meissner, 1984.) Swift and Stern's empty anorexics and their borderline anorexics and Johnson and Connor's (1987) borderline and false self/narcissistic anorexics and bulimics all appear to belong to this second category of character-disordered individuals who have eating disorders.

Two deficits within people with borderline character structures are particularly important to this discussion of eating disorders. The person with a borderline personality structure or character disorder is thought to split the "self" and "other" introjects into "good" and "bad" parts, relating to herself and to others as if they were either all good or all bad. Selvini-Palazzoli (1978) felt that the anorexic employed this splitting by thinking of her body as if it were all bad, the source of all her misfortunes, and her mind, as if it were the good part of herself which could control her body by starving it.

The second deficit involves the lack of modulation and fusion of the borderline's libidinal and aggressive drives. The person with a character disorder shows extremes of unmodulated emotions which constantly shift (Mahler et al., 1975). Lability of mood is common in the eating-disordered (Johnson & Reed, 1982). Brisman and Siegel (1984) felt that binge eating and/or alcohol might be used by bulimics to help bind their anxiety and in other ways to try to modulate their

emotions.

The character-disordered anorexic or bulimic, then, is thought to engage in splitting, especially by relating to herself and others as all good or all bad. She often feels empty because she is not yet a "whole" person in which good and bad self-introjects are combined and she lacks a firm sense of self, a firm sense of being independent and capable. She shows extremes of unmodulated emotions. She has difficulty comforting herself and often tries to soothe herself by eating and/or purging. It appears that this type of eating-disordered individual is the type Goodsitt (1977) and Lerner (1983, 1986) have described as having undergone narcissistic injury and with whom therapy must be specialized.

If the arrest occurs during "on-the-way-to-object constancy" or later, the self- and object representations are separate and whole. This healthier individual is able to recognize that there are positive and negative aspects of each person and of herself. She is able to love someone even when the person is not present and/or when the person is not satisfying her needs. The ego defenses of this type of eating-disordered person are also more mature: repression, reaction formation, sublimation, etc. (Masterson, 1981). Within this group of neurotic bulimics and anorexics could be put Swift and Stern's (1982) "emotionally conflicted, identity-confused anorexics," Masterson's (1977) neurotic anorexics, and Johnson and Connors' (1987) neurotic anorexics and bulimics. Although these individuals may need hospitalization because of dangers to their physical health, therapy with them is more short-term because their symptoms are felt to be an

expression of conflictual drives or a reaction to traumas which they are able to resolve or work through given their greater ego-strength, high levels of introspection, and ability to relate to others in a developmentally appropriate way (Johnson & Connors, 1987; Swift & Stern, 1982).

Object Relations in the Eating-disordered

As the preceding discussion suggests, if the early primary caregiver-child interactions have not been healthy, especially if the primary caregiver has failed to reflect back to the child the sense that she is competent and valued (Goodsitt, 1977), has failed to appropriately respond to the child's communication of needs and feeling states (Bruch, 1973), and/or has failed to give the child the sense that it is safe to be a separate person (Masterson, 1977), it results in disordered object relations in that child. Many, among them Goodsitt (1977), Lerner (1983, 1986), Levenkron (1985), Johnson and Connors (1987), Masterson (1977), Sugarman and his associates (Sugarman & Kurash, 1982; Sugarman, Quinlan, & Devinis, 1981) have suggested, especially by examples presented in case studies, that the presence of impaired object relations makes a person more vulnerable to the development of an eating disorder.

Studies of object relations among the eating-disordered suggest the presence of significant impairment. Strauss and Ryan (1987) found more pathological object relations and poorer self concepts among bulimic anorexics and restricting anorexics than among controls. Steiger, VanderFeen, Goldstein, and Leichner (1989) found evidence of

poor parental bonding between eating-disordered females and their fathers. Aronson (1986) found a relationship between severity of disordered dietary habits and severity of object relations impairment. Becker, Bell, and Billington (1987) found greater object relations disturbance (especially in terms of the fear of abandonment and the lack of autonomy in relationships) in two types of bulimics than was found in normal and binge eaters.

Summary and Hypothesis

In an attempt to better understand the nature of eating disorders and hence the type of treatment which is best for each cluster of behaviors, physicians and therapists, among them, la Tourette (1895) (Sours, 1980), Janet (1903) (Sours, 1980), Bruch (1973), Dally (1969), and Sours (1980) have attempted to subdivide the eating-disordered into groups. One major controversy has concerned whether or not anorexia and bulimia are part of a common disorder or are separate disorders. Researchers have tried to resolve this controversy by examining not only the disordered dietary behaviors, such as starving, bingeing, and purging, but also the personality characteristics and/or psychopathology present in each eating-disordered subgroup.

Two different viewpoints have arisen. According to the first, in which an eating-disorders' spectrum is hypothesized, both anorexia nervosa and bulimia nervosa may exist in individuals of all three different levels of character organization: neurotic, character-disordered, and psychotic (Johnson & Connors, 1987; Masterson, 1977; Swift & Stern, 1982). Such a theoretical stance would suggest that

similar types and levels of psychopathology might exist in individuals with different clusters of disordered dietary behaviors and that there would be more similarities than differences among different subgroups of eating-disordered people. Such a viewpoint might also suggest that a variety of types and levels of psychopathology might be associated with each subgroup of eating-disordered individuals.

A number of similarities do appear to exist among eating-disordered groups. Research suggests that both anorexics and bulimics have poor self concepts and more pathological object relations than controls (Aronson, 1986; Becker et al., 1987; Steiger et al., 1989; Strauss & Ryan, 1987). Both anorexics and bulimics tend to be depressed and to feel withdrawn (Norman & Herzog, 1983) and to bind their anxiety into somatic concerns (Lepkowsky, 1987; Scott & Borofino, 1986; Tracy et al., 1987).

Some studies have also found a variety of types and levels of psychopathology within each subtype of eating disorder studied (Grace et al., 1987; Gwirtsman, 1983; Norman & Herzog, 1983; Skoog et al., 1984; Scott & Borofino, 1986; Thompson, 1988; Vigersky et al., 1986). It appears that there are anorexics and bulimics with disordered character structures (Levin & Hyler, 1986; Piran et al., 1988; Small et al., 1982; Sours, 1984; Strober & Goldenberg, 1981). There also appear to be some relatively well-adjusted eating-disordered individuals (Lacey, 1982; Levin & Hyler, 1986; Johnson et al., 1982) as well as a population of eating-disordered individuals with psychotic features (Bruch, 1973; Ferguson & Damluji, 1988; Lepkowsky, 1987; Small et al., 1981; Sours, 1982). Thus, these findings suggest the presence of all

subtypes of eating-disorders within each of the three levels of character structure.

However, there is a second viewpoint. Other studies suggest that one type of disordered dietary behavior is associated with higher levels of psychopathology than another type and/or that certain types of psychopathology occur more frequently in one subtype than in another. For example, it appears that anorexics are more withdrawn and constricted than bulimics, tending to avoid close relationships (Lepkowsky, 1987; Norman & Herzog, 1983; Tracey et al., 1987) and to evidence the presence of avoidant or Cluster III, DSM-III (APA, 1980) personality disorders (Lepkowsky, 1987; Piran et al., 1988; Tracy et al., 1987). High levels of psychopathology have been found among inpatient anorexics who evidenced poor reality testing (Roland, 1970; Selvini-Palazzoli, 1971; Sugarman et al., 1982) and other psychotic trends (Ferguson et al., 1988; Lepkowsky, 1987; Small et al., 1982).

Bulimics, on the other hand, tend to show a greater need for affection (Lepkowsky, 1987; Norman & Herzog, 1983; Tracy et al., 1987), to be more impulsive (Casper et al., 1980; Fairburn & Cooper, 1984; Garner et al, 1985a, 1985b; Garfinkel et al., 1980; Pyle et al., 1981; Weiss & Ebert, 1983) and to be more emotionally labile (Casper et al., 1980; Garfinkel et al., 1980) than anorexics. They are also more likely to exhibit the presence of histrionic, narcissistic (Lepkowsky, 1987; Tracy et al., 1987) or borderline personality disorders (Gartner et al., 1988; Levin & Hyler, 1983; Johnson et al., in press; Radant, 1985; Yates et al., 1988) than are anorexics.

Which is true, then? Do all levels and kinds of psychopathology

and object relations exist in each subtype of eating disorders as Masterson (1977), Swift and Stern (1982), and Johnson and Connors (1987) suggest, or are there specific differences among groups as some of the studies suggest? The purpose of this study was to examine the type and level of psychopathology and disturbed object relations among three types of eating-disordered females in order to see if specific associations did exist among group, type, and level, or whether the same patterns of types and levels of psychopathology and disturbed object relations would emerge in each type of disorder.

In addition to a more general examination of differences in levels and kinds of psychopathology using the Eating Disorders Inventory (EDI) and the Millon Clinical Multiaxial Inventory-II (MCMI-II) (Millon, 1987), two more specific comparisons were also made. Bulimics were compared to anorexics on two clusters of personality disorders. The first cluster included the avoidant, schizoid, and schizotypal personality disorders and the second, the narcissistic and histrionic personality disorders. There are two reasons these more specific comparisons were made. It will be recalled from the previous discussion that there is some question about whether or not people who are presently bulimic but have been anorexic in the past more resemble anorexics or bulimics (Casper et al., 1982; Garfinkle et al., 1980; Garner et al., 1985a, 1985b; Strober et al., 1982). In the present study, this question will be further explored by contrasting bulimics who have been anorexic and bulimics who have never been anorexic with restricting anorexics on personality styles/disorders which are related to the behaviors measured in the earlier studies.

In addition, the findings of previous studies using the MCMI-I suggested that anorexics exhibited a greater tendency toward social withdrawal and constriction than did bulimics who tended to actively seek interpersonal need-satisfaction. In these studies a general group of anorexics was used, a group which consisted of both restricting anorexics and anorexics who also binged and purged (bulimarexics). In order to see if the same distinction between anorexics and bulimics would be found on the newer version of the Millon test (the MCMI-II), using "purer" groups, the scores on the scales of the MCMI-II which measure social withdrawal and constriction (Avoidant, Schizoid, and Schizotypal) and those which measure the active pursuit of need-satisfaction (Histrionic and Narcissistic) were compared. The "purer" groups included a group of restrictive anorexics who did not purge, called restricting anorexics (RA), a group of bulimics who had histories of being anorexic, called bulimic anorexics (BA), and a group of bulimics who had never been anorexic and were of normal weight, called normal-weight bulimics (NWB).

The type and level of object relations among the eating-disordered were examined by comparing the eating-disordered groups' mean subscale scores and by comparing the proportion in each group who scored above pathological cutoff points on the Bell Object Relations Test (BORT). A similar study was done (Becker et al., 1987) using bulimics and binge eaters, but not restricting anorexics. In that study, it will be remembered, the purging bulimics were found to be more impaired than the non-purging bulimics on two subscales, the Insecure Attachment and the Egocentricity subscales. Different groups have been used in this

study and the specific order of differences was not hypothesized.

In this study, four groups of females were used in all. In addition to the restricting anorexics, bulmic anorexics, and normal-weight bulimics, a comparison group of obese individuals with no history of anorexia or bulimia was used. A comparison group of obese subjects has often been used in studies of eating disorders (anorexia and bulimia) (Lingswiler, Crowther, & Stephens, 1987; Marcus, Wing, & Hopkins, 1988; Maloney & Klykylo, 1983; Prather & Williamson, 1988; Schulundt, Johnson, & Jarrell, 1985; Scott & Baroffio, 1986; Williamson, Kelley, Davis, Ruggiero, & Blouin, 1985; Williamson, Kelley, Davis, Ruggiero, & Veltia, 1985). While some consider obesity to be an eating disorder (Maloney & Klykylo, 1983; Scott & Baroffio, 1986), it is not listed as an eating disorder in DSM-III-R and there appear to be at least two types of obese women, those who overeat, but do not binge, and those who binge, especially when anxious or depressed (reactive bingers, Hamburger, 1951) (Hamburger, 1951; Lingswiler et al., 1987; Prather & Williamson, 1988). Although the reactive bingers are thought to have emotional problems which are related to their eating (Hamburger, 1951; Stunkard, 1977), there is no evidence to suggest that they have the same underlying personality disturbance as do bulimics and anorexics (see Bruch's factors, pp. 2-3).

Although the obese are concerned about weight and have been found to overestimate their size and to wish to be thinner (Williamson, et al., 1985), they do not appear to be as obsessed as the anorexics and bulimics with the wish to be thin, nor do they tend to engage in extreme behaviors such as purging, excessive exercising, etc. to lose

weight. What makes them different from anorexics and bulimics? Is it a different pattern or degree of psychopathology and disturbed object relations? In short, the obese group was used in order to determine if the "classical" eating-disordered groups (anorexics and bulimics) could be differentiated from an abnormally weighted group, such as the obese, in terms of levels and types of psychopathology and object relations.

The following are the specific hypotheses which were used in this study:

1. There will be differences among groups in the degree of psychopathology shown on different scales of the Eating Disorders Inventory (EDI) (Garner, Olmsted, & Polivy, 1984) and the Millon Clinical Multiaxial Inventory-II (MCMI-II) (Millon, 1987) with the obese showing the lowest scores.
2. The restricting anorexics will exhibit a greater tendency toward social withdrawal and constriction than will the bulimic anorexics and the normal-weight bulimics as evidenced by higher scores on the Avoidant, Schizotypal, and Schizoid scales of the MCMI-II.
3. The bulimic anorexics and normal-weight bulimics will show a greater tendency to actively seek interpersonal need-satisfaction than will the restricting anorexics as evidenced by higher scores on the Histrionic and Narcissistic scales of the MCMI-II.
4. There will be a difference in the proportion of subjects in each group which score above pathological cutoff points on scales grouped together by level of severity as measured by

the MCMI-II, with the obese showing the smallest proportion on each scale. The specific categories of scales as utilized by Millon (1987) are:

A. Clinical Syndromes (Anxiety Disorder, Somatoform Disorder, Bipolar-Manic Disorder, Dysthymic Disorder, Alcohol Dependence, and Drug Dependence), disorders of moderate severity.

B. Severe Personality Pathology (Schizotypal, Borderline, and Paranoid), the most serious character disorders.

C. Severe Syndrome (Thought Disorder, Major Depression, Delusional Disorder), disorders of marked severity.

5. There will be differences among groups in the degree of disordered object relationships as shown by scores on each scale of the Bell Object Relations Test (BORT) (Bell, 1983). The obese group will evidence the lowest scores.

6. There will be differences among groups in the proportion of subjects scoring above pathological cutoff points on each scale of the BORT, with the obese group showing the smallest proportion.

Although there were not any hypotheses which dealt specifically with whether or not a certain type of psychopathology appeared to be typical of each group, an exploratory analysis was undertaken. On the EDI, if a mean subscale score of any group fell within the band of scores found in the normative anorexic group (Garner & Olmsted, 1974), that group was felt to show evidence of the kind of psychopathology thought to be measured by that subscale. Similarly, if a certain

percentage of subjects within a group scored above the pathological cutoff point on a MCMI-II scale or a BORT subscale, that proportion of the group was considered to exhibit evidence of the type of psychopathology thought to be measured by that particular scale or subscale.

The level of psychopathology found in each group was dealt with in more than one way. If the mean scores fell within a pathological band or were above a pathological cutoff point, high levels of psychopathology were presumed to exist; if not, low levels or the absence of pathology was thought to exist. On the MCMI-II psychopathology was assessed in a way that involved qualitative distinctions as well as estimates of the degree or level of psychopathology. The author, Millon (1987) divided the 22 clinical scales on the basis of axis and level of severity. He divided the scales into two groups of axis I disorders, the six Disorders of Moderate Severity and the three Disorders of Marked Severity, and two groups of axis II disorders, the 10 moderately severe Clinical Personality Pattern scales, and the three Severe Personality Pathology scales. Therefore, if a high proportion of a group scored in the pathological range on a number of scales falling in the Disorders of Moderate Severity category, for example, but only a small proportion of subjects in that group scored in the pathological range on the scales in the Marked Severity category, one could conclude that the group was characterized by the presence of a moderately severe level of psychopathology, rather than by the presence of a more severe level of psychopathology.

CHAPTER II

METHODOLOGY AND PROCEDURE

Subjects

There were 97 female, Caucasian, eating-disordered and obese subjects who took part in this study. All of the subjects were involved in individual and/or group psychotherapy with 43 different therapists at 34 facilities. There were 4 Canadian subjects who came from an outpatient hospital clinic. All were seen individually by the same therapist. There were 93 subjects from the United States. Among these 93 were 17 subjects seen by eight different therapists at five university counseling centers. Ten subjects were patients from four inpatient hospital programs, seen by four different therapists. Among the 93 were 11 patients seen by three different therapists at three different outpatient hospital clinics. One patient came from a community mental health center. There were 41 patients seen by 16 different therapists at 10 private practices specializing in the treatment of eating disorders. There were 12 patients seen by 10 different therapists in 10 private practices whose areas of specialization were not known (see Table A). At least 20 subjects seen in individual therapy were also attending group therapy sessions.

The subjects, aged 15 to 43 years, were divided into four groups based upon their disordered dietary behaviors and their weight. The obese, comparison group (O group) consisted of 25 females ranging in

age from 19 to 43 years (M = 30.0 years). Each obese subject was at least 20% overweight (according to Kemsley 1953/1954 in Crisp, 1980, see Appendix B). Of these, 7 subjects were morbidly obese (either 100 pounds or 100% over their expected weight based on their ages and heights) (Stunkard, 1959). None had a history of anorexia nervosa or bulimia nervosa. Of these, 11 were involved in individual therapy at private practices specializing in the treatment of eating disorders, 6 others were in individual therapy at private practices whose areas of specialization are not known. One obese subject was an inpatient in a general hospital, and 6 were involved in individual therapy at university counseling centers (see Table A).

The normal-weight bulimic group (NWB group) consisted of 27 bulimics without a history of anorexia nervosa. The normal-weight bulimics ranged in age from 18 to 35 years (M = 25.7 years). Twenty-six were involved in individual therapy, seven at university counseling centers, 3 in inpatient hospital wards, six at outpatient hospital clinics, 1 at a community mental health center, 6 at private practices specializing in the treatment of eating disorders, and 3 in private practices whose specialty is not known. One normal-weight bulimic was involved only in an outpatient therapy group (see Table A). The number of years the normal-weight bulimics had been eating-disordered ranged from 1 to 17 years (M = 7.9 years) (see Figure 2). Sixteen normal-weight bulimics indicated the length of time they had been in psychotherapy for eating disorders. The length of treatment ranged from 1 month to 120 months (10 years) with a mean of 17.9 months. Out of the total normal-weight bulimic sample of 27 subjects, 15 indicated

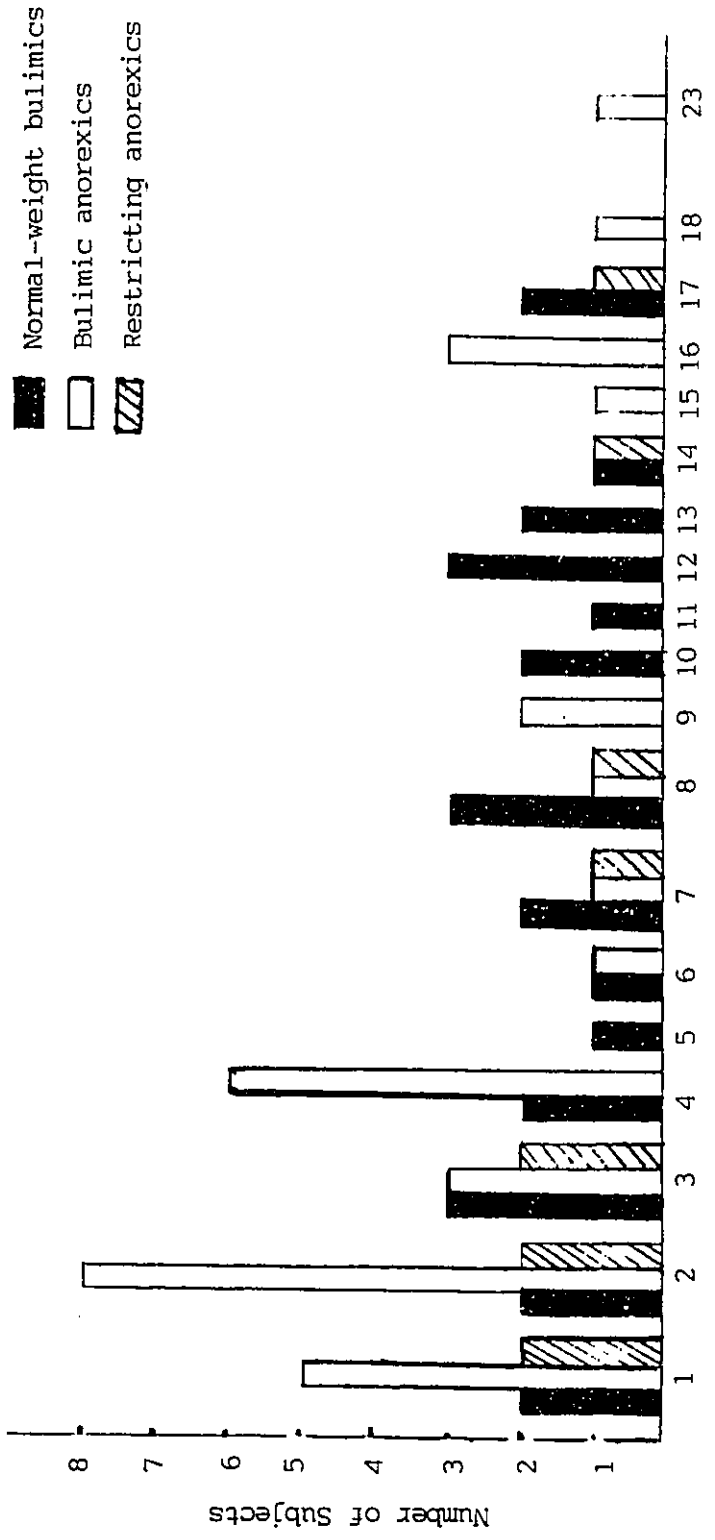

Figure 2. Chronicity of eating disorder by group.

that they were or had been hospitalized for the treatment of an eating disorder, 6 (22.2%) were on antidepressants, 1 (3.7%) was on anti-psychotic medication, and none were taking anti-anxiety medication (see Table 3).

The bulimic anorexic group (BA group) consisted of 35 bulimic females who had previously been anorexic and who ranged in age from 15 to 43 years ($\underline{M}$ = 35.0 years). Thirty-one were involved in individual therapy, 4 at university counseling centers, 5 in inpatient hospital wards, 3 at outpatient hospital clinics, 18 at private practices specializing in the treatment of eating disorders, and 1 at a private practice whose specialty is not known. Four bulimic anorexics were involved only in group therapy (see Table A). The number of years the bulimic anorexics had been eating-disordered ranged from 1 to 23 years ($\underline{M}$ = 5.9 years) (see Figure 2). Seventeen bulimic anorexics indicated the number of months they had received treatment for an eating disorder. The range was from 2 to 79 months (6.6 years) with a mean of 18.5 months. Out of the total bulimic anorexic sample of 35 females, 25 (57.1%) indicated that they either were being or had been hospitalized for the treatment of an eating disorder (see Table 3). Psychotropic medication usage at the time of testing included the following: 3 (8.6%) of the group were taking antidepressants, 1 (2.9%) was on anti-psychotics, and 1 (2.9%) was taking anti-anxiety medication (see Table 3).

Table 3

Treatment Data by Group

Variable	Group							
	Obese		Normal-Weight Bulimic		Bulimic Anorexic		Restricting Anorexic	
	n	%	n	%	n	%	n	%
Primary treatment								
Out-no hospital	17	68	10	37.0	9	25.7	2	20.0
Out-previous hospital	2	8	5	18.5	14	40.0	7	70.0
General hospital	1	4	4	14.8	6	17.1	1	10.0
Mental hospital	0		0		0		0	
Counsel center	5	20	7	25.9	4	11.4	0	
Support group/ previous hospital	0		1	3.7	2	5.7	0	
Antidepressant Yes	3	12	6	22.2	3	8.6	3	30.0
Anti-psychotic Yes	2	8	1	3.7	1	2.9	0	
Anti-anxiety Yes	1	4	0		1	2.9	0	

The restricting anorexic group (RA) consisted of 10 anorexic females who each weighed at least 15% less than would be expected given their height and age. They maintained their low weights by severely restricting their caloric intake and by exercising, not by purging. They ranged in age from 17 to 35 years ($\underline{M}$ = 25.2 years). All were involved in individual therapy. One was a hospital inpatient, 1 was a hospital outpatient, 6 were being seen by private practitioners specializing in the treatment of eating disorders, and 2 were seen by private practitioners whose specialties were not known (see Table A). The restricting anorexics had been eating-disordered from 1 to 17 years ($\underline{M}$ = 5.8 years) (see Figure 2). Eight out of the 10 mentioned how many months they had been involved in psychotherapy for the treatment of an eating disorder. The range was from 1 to 146 months (12.2 years) with a mean of 45 months (3.8 years). Out of the total restricting anorexic sample of 10 females, 8 (80%) indicated that they were or had been hospitalized for the treatment of their eating disorders, and 3 (30.0%) were taking antidepressants when tested. None were taking anti-psychotic or anti-anxiety medication at the time of testing (see Table 3).

Although the number of years the women had been eating-disordered differed among the groups, the difference was not significant (see Table 4). Although the number of months in treatment differed among eating-disordered groups (using the small sample of subjects who indicated length of treatment), this difference was not significant (see Table 5). Table 6 presents the relevant categorical demographic data for each group. A more complete breakdown of the

Table 4

Summary of Analysis of Variance on Length of Eating Disorder With Group Membership as Source of Variation

Source of Variation	SS	df	MS	F
Group	76.82	2	38.41	1.35
Residual	1950.95	69	28.27	
Total	2027.77	71		

* p = .05. ** p = .01. *** p = .001.

Table 5

Summary of Analysis of Variance on Months in Treatment With Group Membership as Source of Variation

Source of Variation	SS	df	MS	F
Group	5173.43	2	2586.71	2.78
Residual	36183.54	39	927.78	
Total	41356.97	41		

*p = .05. **p = .01. ***p = .001.

Table 6

Demographic Data by Group

Variable	Group							
	Obese		Normal-Weight Bulimic		Bulimic Anorexic		Restricting Anorexic	
	n	%	n	%	n	%	n	%
Marital								
Never	15	60.0	15	55.6	26	74.3	7	70.0
First	3	12.0	7	25.9	6	17.1	3	30.0
Remarried	1	4.0	1	3.7	0		0	
Separated	0		1	3.7	0		0	
Divorced	5	20.0	1	3.7	3	8.6	0	
Cohabitating	1	4.0	2	7.4	0		0	
Habitat								
With parents	6	24.0	5	18.5	12	34.3	4	40.0
Roommate	3	12.0	5	18.5	10	28.6	3	30.0
Conjugal	7	28.0	12	44.4	6	17.1	3	30.0
Alone	9	36.0	5	18.5	6	17.1	0	
Other	0		0		1	2.9	0	
SES								
Class 1	1	4.0	4	14.8	1	2.9	2	20.0
Class 2	8	32.0	10	37.0	13	37.1	4	40.0
Class 3	5	20.0	2	7.4	13	37.1	3	30.0
Class 4	4	16.0	4	14.8	2	5.7	0	
Class 5	3	12.0	2	7.4	4	11.4	1	10.0
Class 6	0		3	11.1	0		0	
Class 7	1	4.0	0		1	2.9	0	
Class 8	3	12.0	2	7.4	1	2.9	0	

Table continues

Table 6 continued

Variable	Group							
	Obese		Normal-Weight Bulimic		Bulimic Anorexic		Restricting Anorexic	
	n	%	n	%	n	%	n	%
Primary role								
Wage earner	13	52.0	7	25.9	14	40.0	1	10.0
Housewife	1	4.0	4	14.8	3	8.6	3	30.0
Student	11	44.0	14	51.9	13	37.1	6	60.0
Other	0		2	7.4	5	14.3	0	
Religion								
Protestant	3	12.0	10	37.0	8	22.9	5	50.0
Catholic	5	20.0	8	29.6	21	60.0	2	20.0
Jewish	1	4.0	0		1	2.9	2	20.0
Other	16	64.0	9	33.3	5	14.3	1	10.0
Geographic area								
Mountain west	5	20.0	5	18.5	1	2.9	0	
Pacific NW	0		0		2	5.7	0	
Midwest	18	72.0	16	59.3	25	71.4	6	60.0
Eastwest	2	8.0	3	11.1	6	17.1	2	20.0
South	0		0		0		1	10.0
California	0		1	3.7	0		0	
Ontario	0		2	7.4	1	2.9	1	10.0

Table continues

Table 6 continued

Variable	Group							
	Obese		Normal-Weight Bulimic		Bulimic Anorexic		Restricting Anorexic	
	n	%	n	%	n	%	n	%
Education								
Post-graduate complete	5	20.0	2	7.4	5	14.3	0	
Some post-graduate	4	16.0	1	3.7	1	2.9	0	
College graduate	4	16.0	6	22.2	4	11.4	1	10.0
Some college	11	44.0	14	51.9	16	45.7	6	60.0
High school graduate	1	4.0	3	11.1	8	22.9	1	10.0
Some high school	0		1	3.7	1	2.9	2	20.0

geographical areas the subjects came from can be found in Appendix C.

Inclusion Criteria

In order to be included in the study, all of the eating-disordered subjects (the normal-weight bulimics, bulimic anorexics, and restricting anorexics) had to fit the DSM-III-R criteria for either anorexia nervosa or bulimia nervosa (see Tables 1 and 2). Two types of information were used to determine whether or not they fit the DSM-III-R criteria. First of all, the diagnosis of each subject was indicated by her therapist on a subject data form which included the criteria (see Appendix D). Next, information about the frequency of bingeing, purging, and fasting, the duration of the eating disorder, and the age, height, and weight of each subject as indicated in responses to questions on The Diagnostic Survey for Eating Disorders-Revised (DSED-R) (Johnson, 1984; Johnson & Love, 1984), was checked to verify not only that the subject was either bulimic or anorexic, but that she was a normal-weight bulimic, bulimic anorexic, or restricting anorexic. In addition, all of the eating-disordered subjects had to have pathological profiles on the Eating Disorders Inventory (EDI) (Garner & Olmsted, 1984) (see Figure 3) to be included in the study. To be included in the study the obese subjects had to be at least 20% overweight (according to Kemsley, 1953/ 1954 in Crisp, 1980, see Appendix B) and could not have had a history of anorexia or bulimia nervosa. Although it appeared from the EDI profiles that many of the obese might have had an atypical eating disorder (an "Eating Disorder Not Otherwise Specified") (see Table 7), since their therapists diagnosed them as <u>obese</u>, these subjects will be referred to as <u>obese</u> in

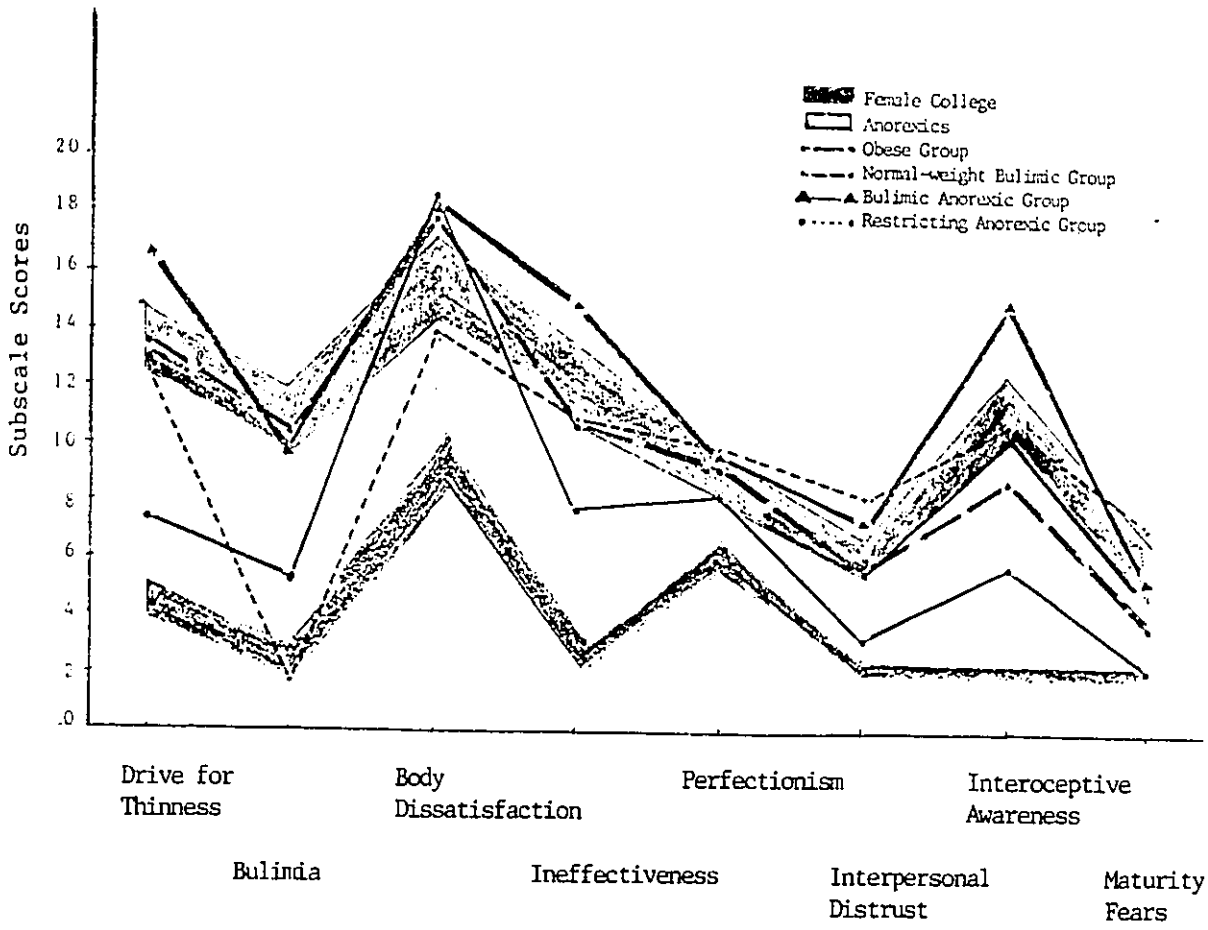

Figure 3. Mean scores on Eating Disorder Inventory by Group.

Table 7

DSM-III-R Criteria for Eating Disorders Not Otherwise Specified

---

Disorders of eating that do not meet the criteria for a specific eating disorder.

Examples:

1. a person of average weight who does not have binge eating episodes, but frequently engages in self-induced vomiting for fear of gaining weight
2. all of the features of anorexia nervosa in a female except absence of menses
3. all of the features of bulimia nervosa except the frequency of binge eating episodes

---

Diagnostic and Statistical Manual of Mental Diseases, 3rd ed., revised (1987). American Psychiatric Association, p. 71.

this study. All of the subjects, both the eating-disordered and the obese subjects had to be involved in psychotherapy.

Originally the age range was set at 18 to 35 years. Because it was difficult finding enough subjects, especially restricting anorexics and obese volunteers, the age range was changed to reflect the age range of the majority of subjects whose protocols were sent to the researcher. One therapist sent in four protocols of patients below the age of 18. The two of these which were validly completed were used in the study. Nine questionnaire packets were received from individuals over the age of 35. Six of these subject packets were used because the subjects' ages clustered closely together and the subjects came from more than one diagnostic category. The packets of those aged 47 to 65 years were not used in the study because all of the subjects involved were members of the same group (obese), their ages did not cluster together, and the women were post menopausal. The new age range was then set at 15 to 43 years. There was a significant difference in age between the obese group and the bulimic anorexic group (see Table 8).

Materials

Millon Clinical Multiaxial Inventory-II (MCMI-II). One hypothesis of this study was that the groups would differ in the degree of psychopathology exhibited by each. In order to measure the types and levels of psychopathology in terms of DSM-III-R axis I and axis II disorders, this 175-item, forced-choice, true/false, paper/pencil test was used. An objective, self-report measure was chosen because the subjects could not be tested in person. This particular measure was

Table 8

Summary of Analysis of Variance on Age with Group Membership as Source of Variation

Source of Variation	SS	df	MS	F	p
Group	554.59	3	184.86	4.42	.006
Residual	3886.67	93	41.79		
Total	441.26	96	46.26		

chosen for a number of reasons. First, the original version, the MCMI-I (1983), was used in earlier studies of eating-disordered individuals, providing data for comparison purposes. Secondly, one focus of this study was the types and levels of psychopathology. The MCMI-II is designed in a way that allows for the identification of types of psychopathology as well as levels of severity of psychopathology. Each type of psychopathology is measured by a different scale. The levels of psychopathology are indicated by whether or not a score exceeds a pathological cutoff point and by the author's grouping of the scales into divisions based on the severity of psychopathology. Thirdly, there has been a good deal of criticism of the studies examining the incidence of personality disorders among bulimics (Pope, Frankenburg, Hudson, Jonas, & Jurgelun-Todd, 1987; Pope & Hudson, 1989; Pope, Jonas, Hudson, Cohen, & Gaunderson, 1983), in part, because other measures were thought to over-identify people as borderline personality disordered. It was suggested that the symptoms may have been a reflection of high levels of depression rather than of character pathology. The MCMI-II, however, has a built-in correction whose function is to remove the effects of high levels of anxiety and depression on certain scales, among them the Borderline scale (Millon, 1987). Fourthly, because its 22 clinical scales are divided between those that measure the relatively enduring "trait" features of personality and those that measure the more transient, "state" features found in the acute clinical syndromes (Millon, 1987), the MCMI-II might be expected to provide a broader picture of the kinds of psychopathology found among the eating-disordered than was provided by

studies measuring only the presence of axis I or axis II disorders.

The MCMI-II was developed for use with clinical subjects (both inpatients and outpatients). It has a reading level of eighth grade. Two types of scores are provided: raw scores and base rate scores. Base rate scores are transformations made so that "the proportion of patients scoring above each scale's cutoff point matches the actual prevalence among a representative national population of patients [tested with the MCMI-II] who possess each scale's corresponding disorder" (Millon, 1987, p. 94).

Test-retest reliability coefficients for outpatients ranged from .59 to .83 on the personality scales and from .59 to .73 on the clinical syndrome scales (which measure reactive states). For inpatients, the reliability coefficients ranged from .59 to .75 on the personality scales and from .43 to .66 on the clinical syndrome scales. These trends are consistent with the body of thought that would predict the least amount of change in the rather enduring personality traits and more change in the clinical syndromes which are often a function of stress and are affected by clinical interventions such as drug treatment and psychotherapy (Millon, 1981). One would also expect to find more stability in the healthier, outpatient population, especially since they are not exposed to the numerous interventions commonly found in inpatient settings.

Internal consistency among items within each scale ranged from correlations of .81 to .95. The median Kuder-Richardson coeffecient for all clinical scales was .90 (Millon, 1987).

MCMI-II scale profiles were compared to clinicians' independent

diagnoses in three different studies (Millon, 1987). The MCMI-II's diagnostic accuracy was found to be 6.44 times greater than chance. The results of numerous studies in which MCMI-I scores were compared to the scores on other standardized measures are provided in the manual, but there is no information provided about the convergent or divergent validity of the MCMI-II.

MCMI-II personality styles are outlined in Appendix E. The four groups of clinical scales are presented in Appendix F.

Eating Disorder Inventory (EDI). The Eating Disorder Inventory (EDI) (Garner & Olmsted, 1984) is a 64-item, self-report instrument designed to assess a broad range of psychological and behavioral traits common in anorexia and bulimia. It was used in this study first as a screening device to further ascertain that the subjects diagnosed as eating-disordered did indeed appear eating-disordered. Secondly, it was used to help determine the relative types and levels of psychopathology among groups in this study. One hypothesis was that there would be differences among groups with the obese being the least pathological.

The 64 EDI items are scored on a 6-point, forced-choice scale which ranges from "always" to "never." The response considered most representative of pathology ("always" or "never," depending upon the keyed direction) receives the most points, 3; the next most pathological response is scored 2, and the next, 1. The remaining three choices receive no points. Points for each response in a subscale are summed to create the subscale score.

Drive for Thinness Subscale. This seven-item subscale measures

overconcern with dieting, weight preoccupation, and the extreme pursuit of thinness (see Appendix G). Items reflect both the intense desire to be thin and the fear of gaining weight. High internal consistency of the Drive for Thinness has been found among both anorexics and normals. Cronbach's alpha = .85 for each group (Garner & Olmsted, 1984). This subscale correlates highly with tests measuring anorexic attitudes, restrained eating, and dissatisfaction with the bodily regions that change at puberty (Garner & Olmsted, 1984).

Ineffectiveness Subscale. This 10-item subscale reflects feelings of being inadequate, insecure, worthless, and out of control (see Appendix G). Cronbach's alpha coefficients of .90 in anorexics and .86 in normals have been found on this subscale denoting high levels of internal consistency (Garner & Olmsted, 1984). The Ineffectiveness subscale correlates highly with feelings of inadequacy and depression, moderately with feelings of anxiety, and highly with the total score on a measure of psychological distress (Garner & Olmsted, 1984).

Perfectionism Subscale. This six-item subscale measures an intense drive for exceptional performance and high levels of self-criticism (see Appendix G). Cronbach's alpha coefficients of .85 for a sample of anorexics and .76 for a sample of normals have been found for items in this subscale (Garner & Olmsted, 1984). This subscale correlates moderately with measures of anxiety, depression, and interpersonal sensitivity (Garner & Olmsted, 1984).

Interpersonal Distrust Subscale. This seven-item subscale reflects a sense of alienation and the fear of forming close relationships (see Appendix G). Cronbach's alpha coefficients of .85

for anorexics and .80 for normals have been found for items in this subscale (Garner & Olmsted, 1984). Garner and Olmsted (1984) found this subscale correlates moderately with measures of depression, including signs of physical anhedonia, and feelings of inadequacy.

Interoceptive Awareness Subscale. This seven-item subscale measures difficulties recognizing and labeling emotions and satiety states (see Appendix G). Cronbach's alpha coefficients of .83 in anorexics and .81 in normals have been found (Garner & Olmsted, 1984). Garner and Olmsted (1984) found this subscale to correlate significantly with measures of somatization, obsessionality, anxiety, depression, and interpersonal sensitivity.

Maturity Fears Subscale. This eight-item scale measures the desire to return to the "safety" of preadolescent years and to avoid the demands of adulthood (see Appendix G). Cronbach's alpha coefficients of .89 for anorexics and .72 for normals have been found on items of this subscale (Garner & Olmsted, 1984). This subscale correlates moderately with feelings of inadequacy and depression (Garner & Olmsted, 1984).

The EDI has successfully differentiated normal weight bulimics from anorexic bulimics and restricting anorexics (Garner et al., 1985). It has also successfully differentiated the weight-preoccupied from anorexics (Garner, Olmsted, & Garfinkel, 1983), and anorexics from extreme dieters (Garner, Olmsted, Polivy, & Garfinkel, 1983).

The Diagnostic Survey for Eating Disorders-Revised (DSED-R). The Diagnostic Survey for Eating Disorders-Revised is a widely used self-report questionnaire covering demographic, eating and weight-related

information, drug use, and life adjustment (Johnson, 1984). It asks questions about menstrual, medical, psychiatric, and family medical history, and about the frequency of behaviors such as vomiting, bingeing, exercising, and fasting. It was used in this study to confirm diagnoses, gather demographic information, and to obtain information concerning medical and psychiatric history and treatment.

Blishen Occupational Class Scale (Blishen, 1958). Socioeconomic status was determined by using a modification of the Blishen Occupational Class Scale (1958). The Blishen Scale is a seven level index of socioeconomic status using income and education to categorize males and females into classes. Modifications were made in order to take into account the addition of certain technical jobs which were not common when the original scale was produced and to recognize the increased status of some types of occupations during the past decade. These changes were based on recommendations made by Stevens and Featherman (1981), Blishen and McRoberts (1976). Other modifications were made in order to take into account sex differences in socioeconomic status (Blishen & Carroll, 1978). An eighth classification was added, to include those subjects who were unemployed or who were students living on financial aid.

Responses to DSED-R questions concerning the subject's occupation, the parents' occupations, and the subject's major role were used in determining the socioeconomic status of each subject. If the subject lived with her parents or was financially dependent upon them, the mother's or the father's occupation, whichever was higher, was used in the determination. If the subject was married, either her occupation

or that of her husband, whichever was higher, was used in the determination. If the subject lived alone or shared an apartment and she indicated that her main role was as the wage-earner, the subject's occupation was used to determine socioeconomic status.

The Bell Object Relations Test (BORT). The Bell Object Relations Test (Bell, 1983) is a 45-item, forced-choice, true/false measure of object relations, the individual's capacity for human relatedness. One of the hypotheses of this study was that there would be a difference among groups in the type of disordered object relations which appeared. The four possible types correspond to the four subscales of the BORT. Another hypothesis was that there would be differences among groups in the level of disordered object relations (as determined by whether the scores were above or below pathological cutoff points for each subscale). This instrument was chosen to measure the type and level of object relations occurring within each of the four groups. It was chosen because it is a short, easily administered test which has been shown to effectively distinguish patients with borderline personality disorders from patients with other kinds of personality disorders (Gibbons, 1984) and because some of its subtest scores have been found to correlate highly with narcissistic, ambivalent, and need-gratifying interpersonal styles in patients tested (Randolf, 1984). The presence of character disorders, especially of borderline personality disorders, and of disordered object relations has been posited to be one factor which makes some individuals more vulnerable to developing an eating disorder (Johnson & Connors, 1987).

What the four subscales tap is thought to reflect pervasive,

character disorders rather than the effects of acute psychiatric distress. Subscales had low intercorrelations with the Brief Psychiatric Rating Scale subscales (BPRS, Overall & Gorham, 1962) and the Global Assessment Scale scores (GAS) (Endicott, Spitzer, Fleiss, & Cohen, 1976) (Bell, Billington, & Becker, 1986). All four subscales correlated with depressive mood (from .27 to .38), but the BORT was used to successfully differentiate patients with borderline personality disorders from those with affective disorders (Bell et al., 1986) so high scores should not be a function of depressed mood. Positive correlations were found between pathological BORT scores and the MMPI Neuroticism and Depression factors and negative correlations were found between pathological BORT scores and the MMPI Social Extroversion and Family Attachment factors (Miropol, 1982).

Alienation Subscale. Items on this subscale reflect a basic lack of trust in relationships, an inability to attain closeness, and hopelessness about the possibility of maintaining stable and satisfying levels of intimacy (see Table H). High Alienation scores are frequent among borderline personality disorders. Nonpathological adults rarely score high on this subscale (Bell et al., 1986).

Insecure Attachment Subscale. Items on this subscale are endorsed by individuals sensitive to rejection and overly concerned with whether or not they are liked and accepted (see Table H). High scores on this subscale are thought to have the personality traits common in avoidant, dependent, compulsive, or passive-aggressive personality disorders (Bell, 1987).

Egocentricity Subscale. Items on this subscale reflect three

attitudes about relationships: motivations of others are to be mistrusted; others are important only in terms of their relation to oneself; others should be manipulated to achieve one's own goals (see Table H). Elevations were most commonly found in hospitalized and borderline samples (Bell et al., 1986).

Social Introversion Subscale. Items on this subscale reflect shyness, nervousness, and discomfort in heterosexual relationships (see Table H). Single elevations on this subscale are often found among those with chronic psychotic disorders (Bell et al., 1986).

Procedure

The 97 subjects in this study were recruited over a 12-month period through announcements placed in national eating-disorders newsletters, two college campus newspapers, and two city newspapers (see Appendix I). Letters requesting volunteers were also sent to 51 hospitals (one hospital had both inpatient and outpatient eating-disorders programs), 50 private practices, 182 university counseling centers, 12 support groups, and eight community mental health centers. Although 13 counseling centers agreed to take part, only five centers were actually able to find subjects. Five hospitals responded positively and were able to supply subjects. One support group and 22 private practices were also willing and able to supply subjects for the study. A summary of the contacts made and the responses to requests for subjects can be found in Table J.

The referral sources of the subjects who were actually used in the study are summarized in Table K. Twelve subjects took part in the

study after responding to an advertisement in a newspaper or newsletter. Seventy-seven subjects took part in response to requests from their therapists. Seven took part after being contacted at a support group meeting. There is some overlap for Tables J and K because those responding to newspaper or newsletter advertisements were in therapy at hospitals, private practices, and a community mental health center and two subjects contacted at a support group/group therapy meeting were also in therapy with a private practitioner.

Another 39 people were either sent questionnaire packets following their indication of interest or were given packets by their therapists. Their questionnaires were not used in this study because 16 failed to return their packets, 3 subjects returned them after the cutoff date, 4 had incomplete or invalid protocols, 1 was not overweight enough to fit the obesity criteria, 1 had previously been bulimic and was now obese, 3 subjects were too old, 8 were in recovery (no longer had pathological scores on the EDI and were no longer bingeing or purging frequently, or fasting at all), 1 subject had an atypical eating disorder, and 2 were male. (See Table L for a break-down of these totals by group). Of a total of 120 questionnaire packets which were returned, 97 of them were useable. A total of 136 questionnaire packets were given to individuals, 120 of the packets were returned, giving a return rate of 82.2%. Another 114 unused packets were returned by therapists at six private practices, three hospitals, and eight counseling centers because the therapists were unable to find suitable volunteers (see Table L).

After a potential subject read an advertisement about this study

in a newsletter or newspaper, she wrote or telephoned to express an interest in taking part. If the person fit the criteria in terms of age, weight, type of eating-disorder, and being in treatment, she was sent a letter of explanation, two copies of the consent form, and a subject data sheet. (See Appendix D for examples of consent forms and the subject data sheet.) Each subject was advised to complete the two copies of the consent form, to keep one, and to return the other to the researcher. Each subject was also requested to give a subject data sheet to her therapist who was then to return the form to the examiner. After the examiner's copy of the consent form and the appropriate subject data sheet were returned, packets of four questionnaires were sent to each volunteer. No names appeared on the subject data sheets or on the questionnaires; instead, identification numbers which corresponded to those appearing on the consent forms were used. Addressed, stamped envelopes were provided for the return of all materials.

Therapists who expressed interest in the study, after receiving the letter requesting subjects (see Appendix D) went through the appropriate channels at their facilities in order to obtain permission to involve their patients in research. Next, the therapists wrote to the examiner requesting the number of questionnaire packets, consent forms, and subject data forms thought to be needed. The therapists then solicited volunteers among their patients and each therapist was responsible for having the materials completed and returned in the envelopes provided. To insure confidentiality, the consent forms and the data sheets with the diagnoses on them were returned separately.

The order of the presentation of the questionnaires within each subject packet was the same for all subjects: EDI, MCMI-II, DSED-R, and BORT. The directions which accompanied the questionnaires and the thank you letter which was sent to each subject also appear in Appendix D.

Once the questionnaires were returned, the MCMI-II was scored by National Computer Systems, Inc. The BORT was scored using a computer program supplied by its author. The EDI was scored using the appropriate templates and the DSED-R responses chosen for this study were coded for computer entry. Regression and correlational analyses were accomplished using the SPSS-X-3 (SPSS, Inc., 1989).

In order to see if there would be a difference in the degree of psychopathology and disturbed object relations among the four groups, mean raw scale scores on the Millon Clinical Multiaxial Inventory-II (MCMI-II) and mean raw subscale scores on the Bell Object Relations Test (BORT) and the Eating Disorder Inventory (EDI) were first subjected to an analysis of variance (ANOVA). Since there was a significant difference among groups in age, an analysis of covariance (ANCOVA), controlling for age, was next instituted. When significant overall differences among the groups were found and these differences were not lost after the ANCOVA, post hoc Scheffe tests were conducted to determine where the differences between groups lay.

In order to determine if the restricting anorexics would exhibit a greater tendency toward social withdrawal than would the normal-weight bulimics and bulimic anorexics, planned comparisons were made on the Avoidance, Schizotypal, and Schizoid scales of the MCMI-II. On each

scale, the group means of the two bulimic groups were first compared. Next, the combined group means for the two bulimic groups were compared with the mean of the restricting anorexic group. This same procedure was used in an attempt to determine if the normal-weight bulimics and bulimic anorexics would exhibit a greater drive toward need-satisfaction. In this case, planned comparisons were made on the Narcissistic and Histrionic scales from the MCMI-II.

In order to determine if there would be differences among groups in the proportion of subjects scoring above the pathological cutoff points on three groups of MCMI-II scales and on subscales of the BORT, an overall chi-square test was instituted in each case to see if there was a relationship between group membership and classification (whether a score is above or below the cutoff point). If there was a significant overall result, post hoc chi-square statistics were computed using all possible pairs of groups to determine where the differences lay. Where small sample sizes made the use of chi-square inappropriate, the Fisher's Exact Probability test was used.

Two post hoc, correlational analyses were also conducted as part of this study. In order to see if there was a relationship between the number of years subjects in each group had been eating-disordered and the degree of pathology indicated by scale and subscale scores on all three measures and in order to see if there was a relationship between the months subjects in each group had been in treatment and the degree of psychopathology, Pearson product moment correlation coefficients were computed. Correlations were computed separately for each group.

CHAPTER III

RESULTS

Results of Initial Tests of ANOVA Assumptions

A series of one-way analyses of variance was used to analyze the data. Analysis of variance has been shown to be robust when there are moderate departures from normality (Lindman, 1974). The measurements of distribution for each scale are presented in Tables 9, 10, and 11. Although moderate skewness is not thought to effect MS_W, it is interesting to note that it was on the Eating Disorders Inventory (EDI) that skewness occurred most frequently. On the Maturity Fears subscale there was a slight positive skew to the scores among the obese, bulimic anorexic, and restricting anorexic groups and a moderate positive skew to the scores among the normal-weight bulimics. Other deviations from normality included a slight negative skew on the Body Dissatisfaction subscale scores among the obese, a slight positive skew in the Interpersonal Distrust subscale scores among the obese, a moderate negative skew in the Drive for Thinness scores among the bulimic anorexics, and a moderate positive skew to the Bulimia scores among the restricting anorexics. Nonetheless, the most extreme of these departures from normality was within 3 standard deviations of the standard error of skewness.

There were two cases of skewness on the Bell Object Relations Test

(BORT) (see Table 9). There was a slight positive skew in the Alienation subscale scores among the normal-weight bulimics and a slight positive skew on the Egocentricity subscale for the restricting anorexics. On the Millon Clinical Multiaxial Inventory-II (MCMI-II) (see Table II) all of the skewness values were within 2 standard deviations of 0.

Concerning the kurtosis on the scales and subscales used in the ANOVAS, among the restricting anorexics, there was a moderate negative kurtosis on the Social Incompetence subscale of the BORT and a large positive kurtosis on the Egocentricity subscale of the BORT (see Table 9). On the EDI, among the restricting anorexics there was a moderate positive kurtosis on the Drive for Thinness scale and a moderate positive kurtosis on the Maturity Fears subscale. There was also a moderate positive kurtosis on the Maturity Fears subscale among the normal-weight bulimics. On the MCMI-II, there were moderate deviations from normality in the kurtosis on the Histrionic, Bipolar: Manic Disorder, and Delusional Disorder scales among the restricting anorexics. None of the deviations in kurtosis approached the outer limit of 7 or 8 (Lindman, 1974). The most frequent deviations from normality, however, occurred among the restricting anorexics who also had the largest amounts of variance (see Tables, 9, 10, 11).

Tests of homogeneity of variance were carried out. These tests included Cocharans C, The Bartlett-Box R, and the ratio of maximum variance to minimum variance (Winer, 1971). In no cases were there significant departures from homogeneity of variance.

Table 9

Descriptive Statistics for Bell Object Relations Test Scales by Group

Scale		Group			
		O	NWB	BA	RA
Alienation	n	25.00	27.00	35.00	10.00
	M	.03	.42*	.58*	.56*
	SD	.88	.74	.80	1.15
	Skewness	.48	1.02	.00	.53
	Kurtosis	- 1.01	.97	- .91	- .40
Insecure Attachment	n	25.00	27.00	35.00	10.00
	M	.39	.99*	.87*	.57
	SD	.91	.82	.87	.96
	Skewness	- .21	- .56	- .18	- .92
	Kurtosis	- 1.21	.03	- 1.06	.66
Egocentricity	n	25.00	27.00	35.00	10.00
	M	- .31	.29	.12	.15
	SD	.52	.77	.88	.94
	Skewness	.73	.32	1.27	1.89
	Kurtosis	.01	- .80	1.54	4.07
Social Incompetence	n	25.00	27.00	35.00	10.00
	M	.69	.50	.77	.73
	SD	.99	.99	.86	1.15
	Skewness	- .06	.08	- .06	- .03
	Kurtosis	- 1.46	- 1.09	- 1.24	- 2.09

Note. The pathological cutoff points for each scale follows: (Alienation (.36); Insecure Attachment (.72); Egocentricity (.42); Social Incompetence (.98).
*Indicates Mean Scores above the pathological cutoff.

Table 10

Descriptive Statistics for Eating Disorder Inventory Scales by Group

Scale		Group			
		O	NWB	BA	RA
Drive for Thinness	n	25.0	27.0	35.0	10.0
	M	7.4	12.6	16.7	13.5
	SD	5.5	5.3	4.0	6.6
	Skewness	.2	- .0	- 1.1	- .6
	Kurtosis	- 1.3	- 1.4	.7	- 1.0
Bulimia	n	25.0	27.0	35.0	10.0
	M	5.4	10.4	9.8	1.9
	SD	5.2	6.2	6.4	3.0
	Skewness	.5	- .2	.0	1.7
	Kurtosis	- 1.2	- 1.1	- 1.6	2.8
Body Dissatisfaction	n	25.0	27.0	35.0	10.0
	M	18.5	17.9	18.1	13.8
	SD	8.6	8.4	7.0	9.1
	Skewness	- 1.0	- .2	- .5	.1
	Kurtosis	- .2	- 1.6	- .7	- 1.8
Ineffectiveness	n	25.0	27.0	35.0	10.0
	M	7.9	10.6	14.9	10.8
	SD	7.6	7.0	7.2	9.8
	Skewness	.9	.4	.1	.3
	Kurtosis	.4	- .9	- 1.1	- 1.3

Table continues

Table 10 continued

Scale		Group			
		OB	NWB	BA	RA
Perfection	n	25.0	27.0	35.0	10.0
	M	8.0	9.4	9.9	9.9
	SD	4.7	4.8	4.9	4.6
	Skewness	.2	- .3	.3	.6
	Kurtosis	- .3	- 1.1	- .8	- 1.0
Interpersonal Distrust	n	25.0	27.0	35.0	10.0
	M	3.4	5.6	7.4	8.2
	SD	3.9	4.2	5.2	6.6
	Skewness	1.3	.5	.5	.1
	Kurtosis	.9	- .6	- .5	- 1.3
Interoceptive Awareness	n	25.0	27.0	35.0	10.0
	M	5.9	8.8	15.0	10.8
	SD	5.1	4.8	6.8	8.1
	Skewness	.6	.1	.0	- .0
	Kurtosis	- .5	- 1.0	- .9	- 1.3
Maturity Fears	n	25.0	27.0	35.0	10.0
	M	2.4	3.9	5.4	7.1
	SD	2.6	5.2	4.9	7.2
	Skewness	1.0	1.7	1.3	1.7
	Kurtosis	.1	2.3	1.5	2.9

Note. Raw scores are used in computing statistics.

Table 11

Descriptive Statistics for Millon Clinical Multiaxial Inventory-II Scales by Group

Scale		Group			
		O	NWB	BA	RA
Schizoid	n	25.0	27.0	35.0	10.0
	M	19.9	21.4	25.5	28.7
	SD	7.7	8.6	8.9	11.4*
	Skewness	.8	.4	.2	.4
	Kurtosis	.0	- .6	- .7	- .9
Avoidant	n	25.0	27.0	35.0	10.0
	M	24.4	31.3	35.9	23.9
	SD	13.8	13.5	12.7	11.2
	Skewness	.2	.1	- .1	- .1
	Kurtosis	- 1.0	- .6	.0	- 1.3
Dependent	n	25.0	27.0	35.0	10.0
	M	30.5	32.4	36.3	35.2
	SD	7.4	7.2	7.6	9.9*
	Skewness	.6	- .3	- .1	.7
	Kurtosis	- .2	- .1	- 1.1	- 1.2
Histrionic	n	25.0	27.0	35.0	10.0
	M	31.2	34.6	29.2	20.1
	SD	8.9	10.3	12.3*	8.6
	Skewness	- .4	- .6	.8	1.3
	Kurtosis	- .8	- .9	- .1	2.6

Table continues

Table 11 continued

Scale		Group			
		O	NWB	BA	RA
Narcissistic	n	25.0	27.0	35.0	10.0
	M	33.6	36.6	32.7	28.7
	SD	11.1	9.7	12.8*	11.4
	Skewness	.0	- .2	.5	.5
	Kurtosis	- 1.2	.6	- .1	- .9
Antisocial	n	25.0	27.0	35.0	10.0
	M	24.1	32.3	26.0	23.9
	SD	8.9	9.5	10.4*	11.2*
	Skewness	.4	- .1	1.1	- .1
	Kurtosis	- .4	- .5	2.2	- 1.3
Aggressive/Sadistic	n	25.0	27.0	35.0	10.0
	M	27.9	35.4	32.2	26.3
	SD	9.3	13.0*	13.0*	13.4*
	Skewness	.2	.0	.5	.5
	Kurtosis	- .2	- .1	.5	- 1.2
Compulsive	n	25.0	27.0	35.0	10.0
	M	30.2	33.4	36.1	40.8
	SD	8.1	6.6	8.2	8.0
	Skewness	- .3	- .1	- 1.1	- .7
	Kurtosis	- .8	- .4	1.6	- .7

Table continues

Table 11 continued

Scale		Group			
		O	NWB	BA	RA
Passive-Aggressive	n	25.0	27.0	35.0	10.0
	M	34.7	42.3	39.8	34.0
	SD	14.0	13.9	14.8*	17.5*
	Skewness	- .3	- .5	- .4	- .7
	Kurtosis	- .9	- .6	- .7	- .3
Self-Defeating	n	25.0	27.0	35.0	10.0
	M	26.8	33.9	37.0	34.4
	SD	13.2	12.9*	11.9	18.6*
	Skewness	- .1	- .3	- .3	- .5
	Kurtosis	- .2	- .3	1	- 1.6
Schizotypal	n	25.0	27.0	35.0	10.0
	M	19.3	25.3	29.3	32.7
	SD	11.5	12.8	13.7	16.8*
	Skewness	.3	.2	.5	- .5
	Kurtosis	- .9	- 1.1	.0	- 1.4
Borderline	n	25.0	27.0	35.0	10.0
	M	35.1	48.1	50.2	43.1
	SD	15.5	17.2	17.7	23.8*
	Skewness	- .5	- .7	- .7	- .7
	Kurtosis	- .4	- .2	- .4	- 1.3

Table continues

Table 11 continued

Scale		Group			
		O	NWB	BA	RA
Paranoid	n	25.0	27.0	35.0	10.0
	M	24.8	29.3	29.1	28.1
	SD	10.4	10.9	12.0*	14.0*
	Skewness	.1	- .1	.0	.2
	Kurtosis	- .6	.2	- 1.1	.3
Anxiety Disorder	n	25.0	27.0	35.0	10.0
	M	12.8	20.4	22.9	22.1
	SD	9.4	9.6	10.6	10.6
	Skewness	.6	- .3	- .6	- 1.2
	Kurtosis	- .9	- .8	- .7	.5
Somatoform Disorder	n	25.0	27.0	35.0	10.0
	M	17.3	22.3	24.9	23.0
	SD	9.4	8.7	10.1*	9.6
	Skewness	.4	- .1	- .4	- 1.0
	Kurtosis	- .1	- .9	- .6	1.0
Bipolar: Manic Disorder	n	25.0	27.0	35.0	10.0
	M	24.1	27.5	23.7	18.6
	SD	9.4	9.8	11.3*	9.1
	Skewness	- .3	- .3	.6	.1
	Kurtosis	- 1.0	- .5	- .6	- 2.1

Table continues

Table 11 continued

Scale		Group			
		O	NWB	BA	RA
Dsythymic Disorder	n	25.0	27.0	35.0	10.0
	M	24.4	34.6	40.1	37.6
	SD	13.7	13.9	16.6*	20.1*
	Skewness	- .1	- .2	- .6	- .5
	Kurtosis	- .9	- .7	- .6	- 1.2
Alcohol Dependence Disorder	n	25.0	27.0	35.0	10.0
	M	17.4	26.9	24.1	21.3
	SD	7.6	8.8	8.7	10.5*
	Skewness	.0	.7	- .3	- .3
	Kurtosis	.8	1.7	- .2	- .9
Drug Dependence Disorder	n	25.0	27.0	35.0	10.0
	M	24.7	33.5	29.6	24.4
	SD	9.1	9.9	11.9*	13.2*
	Skewness	.3	- .2	.5	.0
	Kurtosis	- .9	- .7	- .1	- 1.6
Thought Disorder	n	25.0	27.0	35.0	10.0
	M	13.2	16.7	19.3	22.8
	SD	7.2	8.5	9.9*	11.8*
	Skewness	.2	.0	.1	- .4
	Kurtosis	.5	- .8	- .4	- 1.3

Table continues

Table 11 continued

Scale		Group			
		O	NWB	BA	RA
Major Depression	n	25.0	27.0	35.0	10.0
	M	17.3	25.7	29.9	26.3
	SD	10.4	11.2	14.3*	15.1*
	Skewness	.0	- .4	- .4	- .4
	Kurtosis	- 1.0	- .5	- 1.1	- 1.1
Delusional Disorder	n	25.0	27.0	35.0	10.0
	M	11.0	12.4	12.9	14.6
	SD	6.0	6.0	6.7	6.9*
	Skewness	.4	.4	.5	- .1
	Kurtosis	.0	- .5	- .5	2.3

Note. Raw scale scores are reported here. Amounts are rounded to the nearest tenth.
*Scores greater than the pooled standard deviations.

Preliminary Analyses of EDI, BORT, and MCMI-II

Because age was not consistent or equivalent across groups, a preliminary analysis of variance (ANOVA) was conducted using age as a dependent variable and group as an independent variable. A significant omnibus F was obtained, $F(3, 93) = 4.23$, $p \leq .006$) (see Table 8). Scheffe analytic comparisons indicated that the obese and the bulimic anorexic groups were significantly different on age with the mean age of the obese group being 30.0 years and the mean age of the bulimic anorexic group being 35.0 years.

In order to control for the possible confounding effects of age in the analyses using the scales of the EDI, BORT, and the MCMI-II, analyses of covariance (ANCOVA) were performed with age as a covariate. A regression approach to calculating the analyses of variance and ANCOVAS was used in light of the unequal number in each group. There were no significant effects due to the covariate age for the BORT (see Tables N-1 to N-4 in Appendix N) and only one effect on the EDI (see Tables N-5 to N-12 in Appendix N). The same pattern of results as in the initial ANOVAS was observed in the BORT ANCOVAS. The ANOVA results for the BORT are presented in Table 12. On the EDI, after age was used as a covariate, the main effect differences on the Maturity Subscale (see Table 13) were lost.

There were some significant effects due to the covariate age on the MCMI-II scales (see Tables N-13 to N-34 in Appendix N). After age was used as a covariate, main effect differences were no longer found on the following MCMI-II scales: Avoidant, Schizotypal, Borderline, Somatoform Disorder, Self-Defeating, and Thought Disorder. The ANOVA

Table 12

Summary of Analysis of Variance on Bell Object Relations Test With Group Membership as Source of Variation

Source of Variation		SS	df	MS	F
Scale					
Alienation	Group	4.84	3	1.61	2.27
	Residual	66.15	93	.71	
	Total	70.99	96	.74	
Insecure Attachment	Group	5.47	3	1.82	2.38
	Residual	71.33	93	.77	
	Total	76.80	96	.80	
Egocentricity	Group	5.07	3	1.69	2.82*
	Residual	55.71	93	.59	
	Total	60.79	96	.63	
Social Incompetence	Group	1.12	3	.37	.40
	Residual	86.11	93	.93	
	Total	87.23	96	.91	

Note. Raw scores were used in computations.

Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .017 (Myers, 1979).

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Table 13

Summary of Analysis of Variance on Eating Disorder Inventory With Group Membership as Source of Variance

Source of Variation		SS	df	MS	F
Scale					
Drive for Thinness	Group	1263.02	3	421.08	16.22***
	Residual	2414.40	93	25.96	
	Total	3677.36	96	38.31	
Bulimia	Group	815.06	3	271.69	8.11***
	Residual	3115.93	93	33.50	
	Total	3930.99	96	40.95	
Body Dissatisfaction	Group	174.33	3	58.11	.89
	Residual	6042.39	93	64.97	
	Total	6216.72	96	64.76	
Ineffectiveness	Group	760.95	3	253.65	4.46**
	Residual	5287.28	93	56.85	
	Total	6048.23	96	63.00	
Perfectionism	Group	54.67	3	18.22	.79
	Residual	2150.81	93	23.13	
	Total	2205.48	96	22.97	
Interpersonal Distrust	Group	291.80	3	97.27	4.23**
	Residual	2135.83	93	22.97	
	Total	2427.63	96	25.29	
Interoceptive Awareness	Group	1328.96	3	442.99	12.18***
	Residual	3381.29	93	36.36	
	Total	4710.25	96	49.06	
Maturity Fears	Group	218.91	3	72.97	3.13*
	Residual	2171.73	93	23.35	
	Total	2390.64	96	24.90	

Note. Raw scores were used in computations.
Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .017 (Myers, 1979).
*$p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Table 14

Summary of Analysis of Variance on Millon Multiaxial Inventory-II With Group Memberships as Source of Variation

Source of Variation		SS	df	MS	F
Schizoid	Group	1150.10	3	383.37	4.98**
	Residual	7158.15	93	76.97	
	Total	8308.25	96		
Avoidant	Group	2221.88	3	740.62	3.68*
	Residual	18694.58	93	201.01	
	Total	20916.46	96		
Dependent	Group	554.46	3	184.82	3.11*
	Residual	5521.04	93	59.37	
	Total	6075.51	96		
Histrionic	Group	1602.34	3	534.11	4.74**
	Residual	10473.58	93	112.62	
	Total	12075.92	96		
Narcissistic	Group	507.09	3	169.03	1.29
	Residual	12160.41	93	130.76	
	Total	12667.51	96		
Antisocial	Group	1083.05	3	361.02	3.72*
	Residual	9017.70	93	96.96	
	Total	10100.74	96		
Aggressive/ Sadistic	Group	1025.78	3	341.93	2.30
	Residual	13848.86	93	148.91	
	Total	14874.64	96		
Compulsive	Group	985.92	3	328.64	5.52***
	Residual	5539.00	93	59.55	
	Total	6523.92	96		
Passive-Aggressive	Group	1002.31	3	334.10	1.56
	Residual	19921.20	93	214.21	
	Total	20923.51	96		
Self-Defeating	Group	1564.02	3	521.34	2.95*
	Residual	16420.04	93	176.56	
	Total	17984.06	96		

Table continues

Table 14 continued

Source of Variation		SS	df	MS	F
Schizotypal	Group	1955.52	3	651.84	3.72*
	Residual	16286.31	93	175.12	
	Total	18241.84	96		
Borderline	Group	3693.58	3	1231.19	3.92
	Residual	29230.38	93	314.31	
	Total	32921.96	96		
Paranoid	Group	343.41	3	114.47	.86
	Residual	12330.55	93	132.59	
	Total	12673.96	96		
Anxiety Disorder	Group	1613.27	3	537.76	5.37***
	Residual	9308.96	93	100.10	
	Total	10922.23	96		
Somatoform Disorder	Group	857.09	3	285.70	3.16*
	Residual	8395.81	93	90.28	
	Total	9252.91	96		
Bipolar: Manic Disorder	Group	612.12	3	204.04	1.95
	Residual	9721.32	93	104.53	
	Total	10333.43			
Dysthymic Disorder	Group	3737.19	3	1245.73	5.15**
	Residual	22485.14	93	241.78	
	Total	26222.32	96		
Alcohol Dependence	Group	1252.05	3	417.35	5.60***
	Residual	6928.47	93	74.50	
	Total	8180.52	96		
Drug Dependence	Group	1233.00	3	411.00	3.51*
	Residual	10890.75	93	117.10	
	Total	12123.75	96		
Thought Disorder	Group	863.07	3	287.69	3.48*
	Residual	7697.30	93	82.77	
	Total	8560.37	96		
Major Depression	Group	2340.25	3	780.08	4.88**
	Residual	14852.27	93	159.70	
	Total	17192.52	96		

Table continues

Table 14 continued

Source of Variation		SS	df	MS	F
Delusional Disorder	Group	107.32	3	35.77	.83
	Residual	4016.80	93	43.19	
	Total	4124.12	96		

Note. Raw scores are used in computations.

Bonferroni's correction for family-wise error indicates an alpha cutoff of .017 (Myers, 1979).

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

results for the MCMI-II are presented in Table 14. The effect for age on the other MCMI-II scales was not significant so these results will be reported without reference to age.

Hypothesis Testing

Hypothesis 1 -- Degree of Psychopathology. The first hypothesis stated that there would be differences among groups in the degree of psychopathology shown on the subscales of the EDI and the scales of the MCMI-II, with the obese group having the lowest, i.e. the least pathological, scores. In order to test the two parts of this hypothesis, a series of one-way univariate analyses of variance was used to compare the obese (O), normal-weight bulimic (NWB), bulimic anorexic (BA), and restricting anorexic (RA) groups on the EDI subscales and the MCMI-II scales.

Hypothesis 1 -- Part 1. EDI Results. The results of the ANOVAS on the EDI will be presented first. There were significant main effect differences on the following EDI subscales: Drive for Thinness, Bulimia, Ineffectiveness, Interpersonal Distrust, and Interoceptive Awareness. Although the obese group appeared to be less pathological than some of the eating-disordered groups, as evidenced by their having had significantly lower scores on certain scales, this was not true in all cases. Most differences among groups occurred between the obese and bulimic anorexic groups and there were only four differences between the eating-disordered groups.

On the Drive for Thinness subscale, all of the eating-disordered groups scored more pathologically than the obese group and the bulimic

anorexics had more pathological scores than the normal-weight bulimics. Examination of the results of the ANOVA (see Table 13) on Drive for Thinness indicates that there was a significant overall effect, $F(3, 93) = 16.22$, $p \leq .000$). Post hoc Scheffe analyses indicated that the significant differences occurred between the normal-weight bulimics ($M = 12.6$) and the obese ($M = 7.4$), between the bulimic anorexic ($M = 16.7$) and the obese ($M = 7.4$), between the restricting anorexic ($M = 13.5$) and the obese ($M = 7.4$), and between the bulimic anorexic ($M = 16.7$) and the normal-weight bulimic ($M = 12.6$), with the larger of the two scores in each case signifying greater pathology. These results suggest that all of the eating-disordered groups had a stronger need to be thinner than did the obese and the bulimic anorexics had a stronger drive for thinness than did the normal-weight bulimics.

On the Bulimia subscale, the normal-weight bulimics and the bulimic anorexics scored higher, more pathologically than the obese. In addition, both the bulimic anorexics and the normal-weight bulimics had significantly higher scores than did the restricting anorexics. Examination of the results of the ANOVA (see Table 13) on the Bulimia subscale indicates that there was a significant overall effect, $F(3, 93) = 8.11$, $p \leq .000$). Post hoc Scheffe analyses indicated that the significant differences occurred between the normal-weight bulimics ($M = 10.4$) and the obese ($M = 5.4$), between the bulimic anorexics ($M = 9.8$) and the obese ($M = 5.4$), between the normal-weight bulimics ($M = 10.4$) and the restricting anorexics ($M = 1.9$), and between the bulimic anorexics ($M = 9.8$) and the restricting anorexics. The results of these analyses suggest that the normal-weight bulimics and bulimic

anorexics engaged in more bingeing and purgeing than did either the obese or the restricting anorexics.

On the Ineffectiveness and Interpersonal Distrust subscales, the bulimic anorexics had significantly more pathological scores than did the obese. Examination of the results of the ANOVA (see Table 13) on the Ineffectiveness subscale indicate a significant overall effect, $F(3, 93) = 4.46$, $p \leq .006$. Post hoc Scheffe analyses indicated that significant differences existed between the bulimic anorexics (M = 14.9) and the obese (M = 7.9). Examination of the results of the ANOVA on Interpersonal Distrust indicated a significant overall effect, $F(3, 93) = 4.2$, $p \leq .007$. Post hoc Scheffe analyses indicated that the differences occurred between the bulimic anorexics (M = 7.4) and the obese (M = 3.4). These results suggest the bulimic anorexics felt more ineffective and were more mistrusting than were the obese.

On the Interoceptive Awareness subscale, the bulimic anorexics scored significantly higher, more pathologically than the obese and the normal-weight bulimics. The results of the ANOVA (see Table 13) on the Interoceptive Awareness subscale indicate that there was a significant overall effect, $F(3, 93) = 12.18$, $p \leq .000$. Post hoc Scheffe analyses indicated that differences occurred between the bulimic anorexics (M = 15.0) and the obese (M = 5.9) and between the bulimic anorexics (M = 15.0) and the normal-weight bulimics (M = 8.8). These results suggest that the bulimic anorexics had more difficulty identifying and expressing emotions and more difficulty determining satiety states than did the obese and the normal-weight bulimics.

Summary of Hypothesis 1, Part 1. Most of the differences among

groups on the level of psychopathology on subscales of the EDI occurred between the obese and one or more of the eating-disordered groups. Most of the differences occurred between the obese and the bulimic anorexics who had more pathological scores on the Drive for Thinness, Bulimia, Ineffectiveness, Interpersonal Distrust, and Interoceptive Awareness than did the obese. Four differences occurred between eating-disordered groups. The bulimic anorexics had more pathological scores than the normal-weight bulimics on the Drive for Thinness and Interoceptive Awareness. The bulimic anorexics and the normal-weight bulimics both had more pathological scores than the restricting anorexics on the Bulimia subscale.

Hypothesis 1, Part 2 (MCMI-II Results). There were twelve differences among groups in the degree of psychopathology shown on the MCMI-II scales. Most of the differences occurred between the obese group, with the lowest scores, as hypothesized, and one or another of the eating-disordered groups. Differences between eating-disordered groups occurred only between the restricting anorexics and the normal-weight bulimics. The differences in degree of psychopathology which did occur involved only 9 of the 22 MCMI-II scales.

The normal-weight bulimics had significantly higher scores than the obese on three scales, the Antisocial, Alcohol Dependence, and Drug Dependence scales suggesting higher levels of antisocial features and higher levels of alcohol and drug dependence among the normal-weight bulimics than the obese.

Examination of the results of the Analysis of Variance (ANOVA) (see Table 14) on the Antisocial scale indicated that there was a

significant overall effect, $F(3, 93) = 3.72$, $p \leq .014$. Significance in this direction suggests greater levels of antisocial features. Post hoc Scheffe tests indicated that there was a significant difference between the normal-weight bulimic group's mean raw scale score (M = 32.3) and the obese group's mean raw scale score (M = 24.1) on the Antisocial scale.

Examination of the results of the ANOVA (see Table 14) on the Alcohol Dependence scale indicated that there was a significant overall effect, $F(3, 93) = 5.60$, $p \leq .001$. Post hoc Scheffe tests indicated that there was a significant difference between the normal-weight bulimic group's mean raw scale score (M = 26.9) and that of the obese (M = 17.4), with the normal-weight bulimics showing higher levels of alcohol dependence than the obese. Results of the ANOVA on the Drug Dependence scale (see Table 13) indicated a significant overall effect, $F(3, 93) = 3.51$, $p \leq .018$. Post hoc Scheffe tests indicated the difference occurred between the normal-weight bulimics (M = 33.5) and the obese (M = 24.7), with higher levels of drug dependence having been found in the normal-weight bulimics.

The normal-weight bulimics only had significantly higher, more pathological scores than one of the other eating-disordered groups and the difference occurred on only one scale, the Histrionic scale. Examination of the results of the ANOVA on the Histrionic scale (see Table 14) indicated a significant overall effect, $F(3, 93) = 4.74$, $p \leq .004$. The results of the post hoc Scheffe tests indicated that there was a significant difference between the normal-weight bulimics (M = 34.6) and the restricting anorexics (M = 20.1). These results suggest

there were greater levels of histrionic features among the normal-weight bulimics than among the restricting anorexics.

The bulimic anorexics had significantly higher, more pathological scores than the obese on five MCMI-II scales, the Dependent, Compulsive, Anxiety Disorder, Dysthymic Disorder, and Alcohol Dependence scales. The results of the ANOVA on the Dependent scale indicated a significant overall $F(3, 93) = 3.11$, $p \leq .03$. Post hoc Scheffe tests indicated that there was a significant difference between the bulimic anorexics ($M = 36.3$) and the obese ($M = 30.5$), with higher levels of dependent features having been found among the bulimic anorexics.

The results of the ANOVA on the Compulsive scale likewise showed a significant overall effect, $F(3, 93) = 5.52$, $p \leq .001$. Post hoc Scheffe tests indicated that the bulimic anorexics had more pathological Compulsive scores ($M = 36.1$) than the obese ($M = 30.2$), suggesting higher levels of compulsivity among the bulimic anorexics than among the obese.

The results of the ANOVA on the Anxiety Disorder scale indicate a significant overall effect, $F(3, 93) = 5.37$, $p \leq .001$. Post hoc Scheffe tests indicate the bulimic anorexics had more pathological Anxiety Disorder scores ($M = 22.9$) than did the obese ($M = 12.8$). That is, there were higher levels of anxiety in the bulimic anorexics than in the obese.

The results of the ANOVA on the Dysthymic scales indicated a significant overall effect, $F(3,93) = 5.15$, $p \leq .002$. Post hoc Scheffe tests indicated the bulimic anorexics had higher, more pathological

scores ($\underline{M}$ = 40.1) than the obese ($\underline{M}$ = 24.4). Thus, the bulimic anorexics showed higher levels of dysthymia than did the obese.

Since the lower levels of anxiety and dysthymia found among the obese might have been related to the difference between groups in the proportion of individuals taking anti-anxiety and antidepressant medication, the number of individuals in each group taking anti-anxiety and antidepressant medication was compared using the Fisher's Exact Probability test. Although 12.0% of the obese, compared to 8.6% of the bulimic anorexics (see Table 3), were taking antidepressants, the difference was not significant. Although 4.0% of the obese and only 2.9% of the bulimic anorexics were taking anti-anxiety medication, the difference was not significant.

The results of the ANOVA on the Alcohol Dependence scale indicated a significant overall effect $\underline{F}(3,93) = 5.6$, $\underline{p} \leq .001$. The results of the post hoc Scheffe tests indicated that the bulimic anorexics had more pathological Alcohol Dependence scores ($\underline{M}$ = 24.1) than did the obese ($\underline{M}$ = 17.4). That is, the bulimic anorexic group showed higher levels of the features related to alcohol dependence.

The restricting anorexics had higher, more pathological scores than the obese on two scales, the Schizoid and Compulsive scales, but higher, more pathological scores than only one of the other eating-disordered groups, the normal-weight bulimics. This last difference occurred on the Schizoid scale. The results of the ANOVA on the Schizoid scale indicated a significant overall effect, $\underline{F}(3,93) = 4.98$, $\underline{p} \leq .003$. Results of the post hoc Scheffe tests indicated the difference occurred between the restricting anorexics ($\underline{M}$ = 28.7) and

the obese (M = 19.9) as well as between the restricting anorexics (M = 28.7) and the normal-weight bulimics (M = 21.4). These results suggest that there were higher levels of Schizoid characteristics among the restricting anorexics than there were among either the obese or the normal-weight bulimics.

The results of the ANOVA on the Compulsive scale (see Table 13) indicated a significant overall effect, $F(3,93) = 5.52$, $p \leq .001$. Results of the post hoc Scheffe tests indicated that not only, as was mentioned earlier, was there a difference between the bulimic anorexics and the obese, there was also a difference between the restricting anorexics (M = 40.8) and the obese (M = 30.2). These last results suggest that there were higher levels of compulsivity among the restricting anorexics than among the obese.

Summary of Results on Hypothesis 1, Part 2. The results of the ANOVAS on the MCMI-II raw scale scores are similar to those found on the EDI subscales. Although the obese did not score less psychopathologically on all scales, they did show significantly lower levels of psychopathology than did the eating-disordered groups on many scales. Only two of the eating-disordered groups differed significantly one from the another. The normal-weight bulimics showed higher levels of histrionic features than did the restricting anorexics who, in turn, showed higher levels of schizoid features than did the normal-weight bulimics. Thus, there was little difference among eating-disordered groups in the degree of psychopathology shown on the MCMI-II scales, but there were more differences in the degree of psychopathology between the obese group and the eating-disordered

groups, especially between the obese and the bulimic anorexic groups.

Hypothesis 2 -- Planned Comparisons Measuring Social Withdrawal. Hypothesis 2 stated that the restricting anorexics would exhibit a greater tendency toward social withdrawal and constriction than would the normal-weight bulimics and the bulimic anorexics as evidenced by higher mean raw scale scores on the Avoidant, Schizotypal, and Schizoid scales of the MCMI-II, all of which tap modes of behavior characterized by social withdrawal. Two sets of planned comparisons were instituted in each case. Since normal-weight bulimics and bulimic anorexics were thought to be more like one another than either was like restricting anorexics (Garfinkel at al., 1985; Garner et al, 1985a, 1985b), the two bulimic groups were first compared to see if this assumption of similarity were correct. Then the means of the two combined bulimic groups were compared to that of the restricting anorexic group to see if there were differences between the combined bulimic groups and the restricting anorexic group on each of the three scales. It was hypothesized that in each case the restricting anorexics would have significantly higher mean scores, indicating the presence of more psychopathology among the restricting anorexics than among the combined bulimic groups.

The results of the first two sets of comparisons on the Avoidant and Schizotypal scales (see Table 15) indicated that while there were no differences between the normal-weight bulimic and the bulimic anorexic groups on each of these scales, there also was no significant difference between the combined bulimic groups and the restricting anorexic group. Thus, it appeared that there were no significant

Table 15

Results of Planned Comparisons Between the Restricting Anorexic Group and the Bulimic Groups for Selected Scales of the Millon Clinical Multiaxial Inventory-II

	Pooled Variance $\underline{t}$ Value	Estimate df	$\underline{t}$ Probability
Scales			
Avoidant			
NWB versus BA	1.28	93	.20
NWB and BA versus RA	0.68	93	.50
Schizotypal			
NWB versus BA	1.18	93	.24
NWB and BA versus RA	1.20	93	.23
Schizoid			
NWB versus BA	1.80	93	.08
NWB and BA versus RA	2.56	93	.01

differences in the levels of psychopathology among the normal-weight bulimics, bulimic anorexics, and restricting anorexics on the Avoidant and Schizotypal scales, suggesting that there was no major difference among these groups in the tendency to withdraw from others, at least as measured by the Avoidant and Schizotypal scales of the MCMI-II.

The results of the third set of planned comparisons (see Table 15) indicated that there was no significant difference in the levels of psychopathology between the normal-weight bulimic and bulimic anorexic groups on the Schizoid scale (t [93] = 1.90, $p \leq .07$). The results of the planned comparison (see Table 15) in which the two bulimic groups were combined and then compared with the restricting anorexics indicated that there was a significant difference between groups (t [93] = 2.55, $p \leq .01$). According to these results, the restricting anorexic group had a higher, more pathological mean raw scale score on the Schizoid scale, indicating a greater tendency to withdraw from others and to have difficulty experiencing pleasure than did the normal-weight bulimics and the bulimic anorexics. However, the results of the post hoc Scheffe tests indicated that the only statistically significant difference between eating-disordered groups existed between the restricting anorexics and the normal-weight bulimics. Thus, by combining groups based on an assumed similarity, a distinction between groups can be missed.

Hypothesis 3 -- Planned Comparisons Measuring Interpersonal Need-Satisfaction. Hypothesis 3 stated that the bulimic anorexics and the normal-weight bulimics would show more signs of actively seeking interpersonal need-satisfaction than would the restricting anorexics as

evidenced by higher mean raw scale scores on the Narcissistic and Histrionic scales of the MCMI-II. Items in both scales are endorsed by people who need to be involved with others in order to feel secure and in order to obtain rewards. Two sets of planned comparisons were instituted in each case. Again, the two bulimic groups were first compared to see if they were more similar than different from each other. Then the means of the two combined bulimic groups were compared to that of the restricting anorexic group to see if there was a difference between the combined bulimic groups and the restricting anorexic group on each of these two scales. It was hypothesized that in each case the score of the combined bulimic groups would be higher, more pathological, than the mean raw scale score of the restricting anorexics.

A series of planned comparisons of the mean raw scale scores of the three groups on the Narcissistic scale found no differences among groups, indicating that there were no significant differences in the levels of psychopathology on the Narcissistic scale. The first planned comparison on the Histrionic scale (see Table 16) found that there was a significant difference between the normal-weight bulimic and bulimic anorexic groups (t [93] = 1.98, $p \leq .05$). However, since the hypothesis stated that there would be a difference between the two combined groups and the restricting anorexic group, the second planned comparison was carried out. The results of this analysis (see Table 16) indicated that there was a significant difference between the combined bulimic group and the restricting anorexic group in the degree of psychopathology on the Histrionic scale (t [93] = 3.26, $p \leq .002$).

Table 16

Results of Planned Comparisons Between the Bulimic Groups and the Restricting Anorexic Group for Selected Scales of the Millon Clinical Multiaxial Inventory-II

	Pooled Variance *t* Value	Estimate df	*t* Probability
Scale			
Histrionic			
NWB versus BA	1.98	93	.05
NWB and BA versus RA	3.26	93	.002
Narcissistic			
NWB versus BA	1.33	93	.19
NWB and BA versus RA	1.51	93	.13

If the first planned comparison had not been instituted or if the results of the post hoc analysis undertaken as part of Hypothesis 1 on the Histrionic scale had not been known, it might have been erroneously assumed that both bulimic groups, the normal-weight bulimics and the bulimic anorexics, differed significantly from the restricting anorexics in their drive toward social need-satisfaction as measured by the Histrionic scale. Looking at the results of both planned comparisons on the Histrionic scale, it is apparent that there was a difference between the two bulimic groups in the level of psychopathology, and that, if the two bulimic groups were combined under the assumption that they were little different from each other, and then compared to the restricting anorexic group, one could erroneously conclude that both bulimic groups were more pathological than the restricting anorexic group. However, the results of the post hoc Scheffe analysis on the Histrionic scale indicated that there was a significant difference only between the normal-weight bulimic and restricting anorexic groups with the normal-weight bulimics exhibiting the higher level of psychopathology. These results suggest that only the normal-weight bulimics exhibited a greater drive toward interpersonal need-satisfaction than did the restricting anorexics, the difference showed up only on the Histrionic scale of the MCMI-II.

Summary of Hypotheses 2 and 3. There was some support for both hypotheses, that anorexics exhibit more evidence of the need for social withdrawal and bulimics exhibit more evidence of the drive toward interpersonal need-satisfaction. However, combining both bulimic groups, the normal-weight bulimics and the bulimic anorexics,

under the assumption that they are little different one from the other, can lead to erroneous conclusions. The differences, as the results of analyses related to the testing of Hypothesis 1, Part 2, suggested, occurred only between the normal-weight bulimics and the restricting anorexics and only on the Schizoid and Histrionic scales, not on the Schizotypal, Avoidant, and Narcissistic scales, as hypothesized. The restricting anorexics, as evidenced by their higher scores on the Schizoid scale, exhibited a greater need for social withdrawal than the normal-weight bulimics and the normal-weight bulimics, as evidenced by their higher scores on the Histrionic scale, exhibited a greater drive toward interpersonal need-satisfaction than the restricting anorexics, at least as measured by these two scales.

Hypothesis 4 — Severity of Psychopathology. The fourth hypothesis stated that groups would differ in the proportion of subjects scoring above the pathological cutoff point on selected scales of the MCMI-II. The pathological cutoff point is a Base Rate, or transformation score of 74. Scores at or above 75 are indicative of the "'presence' of personality or syndrome features" (Millon, 1987, p. 98). The scores chosen to test this hypothesis were those grouped by the author according to their level of severity (Millon, 1987). The six Clinical Syndrome scales measure the presence of reactive states that are moderately severe. The three Severe Syndrome scales measure the presence of reactive states that are more serious. The three Severe Personality Scales measure the presence of the most serious kinds of personality disorders. No specific order of severity among groups was hypothesized except for one. It was hypothesized that the

obese group would have the smallest proportion of scores in the pathological range, that is, the smallest proportion of clinically elevated scores; on each MCMI-II scale.

A series of chi-square analyses was instituted to compare the proportions of individuals in each group scoring above and below the pathological cutoff point of 74 on each of these 12 MCMI-II scales. When a significant difference was found and the requirement of the minimum expected frequency of subjects per cell was met, individual chi-square analyses were done to determine where the difference lay. In each of the individual chi-square analyses, the Yates correction was used making the significance levels more stringent. When the minimum expected frequency requirement was not met, Fisher's Exact Probability Tests were run using all possible combinations of pairs of groups.

The Clinical Syndrome Scales. The first division of scales includes these six scales of moderate severity: Anxiety Disorder, Somatoform Disorder, Bipolar: Manic Disorder, Dysthymic Disorder, Alcohol Dependence, and Drug Dependence. Differences between groups in the proportion of subjects who had clinically elevated scores (over a Base Rate score of 74) occurred on the Anxiety Disorder and Drug Dependence scales only.

On the Anxiety Disorder scale there was a significant relationship between whether a score was above or below the pathological cutoff point and group membership, $X^2(3, N = 97) = 16.20$, $p \leq .001$. A fairly strong relationship between the two variables was observed (Cramer's $V = .41$). Individual chi-square analyses indicated that the normal-weight bulimics and the bulimic anorexics each had

larger proportions of clinically elevated scores on the Anxiety Disorder scale than did the obese. There was a significant difference between the proportion of normal-weight bulimics (48.1%) and the proportion of obese (16.0%) (see Table 17) who scored in the pathological range on the Anxiety Disorder scale, $X^2(1, N = 52) = 4.72$, $p \leq .03$. There was also a significant difference between the proportion of bulimic anorexics (51.4%) and the proportion of obese (16.0%) (see Table 17) who scored in the pathological range on the Anxiety scale, $X^2(1, N = 60) = 6.43$, $p \leq .01$.

Results of the Fisher's Exact Probability tests indicated that there was a significant difference between the bulimic anorexics and the restricting anorexics in the proportion of each group with clinically elevated scores on the Drug Dependence scale. The bulimic anorexics, with 5.7% of its members scoring in the pathological range on the Drug Dependence scale, had a significantly larger proportion of clinically elevated scores than did the obese with 0.0% (see Table 17). The probability level was .01.

The Severe Personality Pathology Scales. The second division of scales includes the three scales which measure the presence of the most serious kinds of personality disorders, the Schizotypal, Borderline, and Paranoid scales. Differences between groups in the proportion of subjects with clinically elevated scores (over a Base Rate scale score of 74) occurred on the Borderline and Schizotypal scales only.

On the Borderline scale there was a significant relationship between whether a score fell above or below the pathological cutoff point and group membership, $X^2(3, N = 97) = 9.80$, $p \leq .02$. The

Table 17

Percent of Individuals Scoring 75 or Over on Clinical Syndrome Scales on Millon Clinical Multiaxial Inventory-II by Group

	Group			
	O (n = 25)	NWB (n = 27)	BA (n = 35)	RA (n = 10)
Scale				
Anxiety Disorder	16.0	48.1	51.4	40.0
Somatoform Disorder	4.0	7.4	11.4	10.0
Bipolar: Manic Disorder	8.0	7.4	11.4	0.0
Dysthymic Disorder	36.0	48.1	65.7	70.0
Alcohol Dependence	0.0	11.1	2.9	0.0
Drug Dependence	0.0	7.4	5.7	0.0

relationship was moderately strong (Cramer's V = .32). Individual chi-square analyses indicated that the normal-weight bulimics and the bulimic anorexics each had higher proportions of subjects with pathologically elevated scores than did the obese. There was a significant difference between the proportion of normal-weight bulimics (51.9%) and the proportion of the obese (12.0%) (see Table 18) with pathologically elevated Borderline base rate scale scores, X^2 (1, N = 52) = 7.64, $p \leq .006$. There was a significant difference between the proportion of bulimic anorexics (42.9%) and the proportion of obese (12.0%) (see Table 18) with pathologically elevated scores on the Borderline scale, X^2(1, N = 60) = 5.22, $p \leq .02$.

Results of the Fisher's Exact Probability tests indicate that there was a significant difference between the restricting anorexics and the obese in the proportion of each group with clinically elevated scores on the Schizotypal scale. The restricting anorexics, with 40.0% above the pathological cutoff of 74, had a significantly larger proportion of clinically elevated scores than did the obese group ($p \leq .004$), which had no scores in the pathological range (see Table 18).

The Severe Syndrome Scales. The third division includes the three scales which measure the presence of the most serious mental disorders, according to Millon's scheme (Millon, 1987). These disorders are often characterized by the presence of psychotic features. This group includes the Thought Disorder, Major Depression, and Delusional Disorder scales. Differences between groups in the proportion of subjects who had clinically elevated scores occurred only on the Major Depression scale with both the restricting anorexics and

Table 18

Percent of Individuals Scoring 75 or Over on Severe Personality Pathology Scales of Millon Clinical Multiaxial Inventory-II by Group

	Group			
Scale	O (n = 25)	NWB (n = 27)	BA (n = 35)	RA (n = 10)
Schizotypal	0.0	14.8	14.3	40.0
Borderline	12.0	51.9	42.9	40.0
Paranoid	4.0	11.1	14.3	10.0

the bulimic anorexics having larger proportions of subjects scoring in the pathological range.

On the Major Depression scale there was a significant relationship between whether a score fell above or below the pathological cutoff point and group membership, $X^2(3, N = 97) = 16.20$, $p \leq .001$. A strong relationship between the variables was observed (Cramer's V = .41). There was a significant difference between the proportion of bulimic anorexics (42.9%) and the proportion of obese (0.0%) (see Table 19) subjects with pathologically elevated scores, $X^2(1, N = 60) = 12.09$, $p \leq .005$. There was a significant difference in the proportion of restricting anorexics (40.0%) and obese (0.0%) (see Table 19) with pathologically elevated scores on the Major Depression scale $X^2(1, N = 35) = 7.68$, $p \leq .006$.

Summary of Hypothesis 4. Concerning the differences among groups in the proportion of individuals scoring in the pathological range on MCMI-II scales grouped by the level of severity, only one difference occurred between the eating-disordered groups. This difference occurred on one of the Clinical Syndrome scales, scales measuring pathology of moderate severity. On the Drug Dependence scale, there was a larger proportion of bulimic anorexic than of restricting anorexic subjects with pathologically elevated scores (scores above a base rate scale score cutoff of 74). There were no restricting anorexics whose scores indicated they were drug dependent.

All of the other differences occurred between an eating-disordered group and the obese group. Also on the Clinical Syndrome scales, the normal-weight bulimics and the bulimic anorexics had larger

Table 19

Percent of Individuals Scoring 75 or Over on Severe Syndrome Scales of Millon Clinical Multiaxial Inventory-II by Group

Scale	Group			
	O (n = 25)	NWB (n = 27)	BA (n = 35)	RA (n = 10)
Thought Disorder	4.0	7.4	11.4	20.0
Major Depression	0.0	18.5	42.9	40.0
Delusional Disorder	0.0	3.7	5.7	10.0

proportions of their groups with clinically elevated Anxiety Disorder scores than did the obese.

On the Severe Personality Pathology scales, scales measuring the presence of the most serious level of personality disorders, there were larger proportions of the normal-weight bulimic and bulimic anorexic groups than of the obese group scoring in the pathological range on the Borderline scale. On the Schizotypal scale, the restricting anorexics had a larger proportion of pathologically elevated scores than the obese group which had no pathological scores on this scale.

On the level of greatest severity, the Severe Syndrome scales, the only significant difference occurred on the Major Depression scale. Both the bulimic anorexics and the restricting anorexics had larger proportions of subjects with pathologically elevated scores on the Major Depression scale than did the obese group which had no scores in the pathological range of this scale. All in all, the results of the chi-square and Fisher's Exact Probability Test analyses on these 12 scales suggest that there is very little support for Hypothesis 4. Most differences in the proportion of subjects in each group with pathologically elevated scores on the three levels of scales occurred between the obese and one or more of the eating-disordered groups. The only difference between eating-disordered groups occurred on the Drug Dependence scale, a scale which is thought to measure a type of pathology of moderate severity. On this scale the bulimic anorexics showed more evidence of drug dependency than the restricting anorexics.

Hypothesis 5 -- Degree of Disordered Object Relations. The fifth hypothesis stated that there would be a difference among groups in the

degree of disordered object relations, with the obese exhibiting the least amount of disorder. A series of one-way univariate analyses of variance were instituted to compare groups on each subscale of the Bell Object Relations Test (BORT). Only one significant difference among groups was found; it occurred on the Egocentricity subscale.

Examination of the results of the analysis of variance on the Egocentricity subscale (see Table 12) indicates there was a significant overall effect, $F(3, 93) = 2.82$, $p \leq .04$. A set of orthogonal contrasts exhausting all degrees of freedom was calculated on this variable to determine where the difference was. There was a significant difference between the obese group and all the other groups, $t(93) = 2.67$, $p \leq .009$. Thus, there were higher levels of egocentricity, concern about oneself, at the expense of others, among the normal-weight bulimics, bulimic anorexics and the restricting anorexics than there were among the obese. However, there were nearly equal degrees of psychopathology among all four groups on all of the other three subscales of the BORT, subscales measuring the presence of problems with intimacy (Alienation subscale), difficulties tolerating separation (Insecure Attachment subscale), and discomfort in social interactions (Social Incompetence subscale).

Summary of Results on Hypothesis 5. No significant differences among eating-disordered groups were found in the level of disturbed object relations as measured by the BORT. All of the eating-disordered groups were little different one from the other. Although the obese group had the smallest mean raw subscale scores on each subscale of the BORT, indicating the lowest level of psychopathology

the difference was only statistically significant on the Egocentricity subscale. Thus, there was almost no support for Hypothesis 5 which stated that there would be differences among groups in the level of disordered object relations.

Hypothesis 6 -- Pathological Level of Object Relations. The sixth hypothesis stated that there would be differences among groups in the proportion of subjects scoring above the pathological cutoff points on each subscale of the Bell Object Relations Test (BORT) with the obese group showing the smallest proportion of subjects with pathologically elevated scores on each subscale. A series of chi-square analyses comparing the proportion of subjects above and below the pathological cutoff point on each subscale of the BORT were instituted. The pathological cutoff points on each subscale are different (see Table 9).

Although the means on the Alienation subscale were above the pathological cutoff point in the normal-weight bulimic, bulimic anorexic, and restricting anorexic groups, and although the means were above the pathological cutoff point on the Insecure Attachment subscale in the normal-weight bulimic and bulimic anorexic groups, there were no significant relationships between scores above or below the pathological cutoff point and group membership for any of the BORT subscales (see Table 20). Thus, it appears that there was no significant difference among groups in the proportion of each group scoring in the pathological range on each subscale of the BORT. However, moderately high proportions of subjects in each group scored above the pathological cutoff points on the Alienation, Insecure

Attachment, and Social Incompetence subscales of the BORT. Over 44.0% in each group (see Table 20) scored in the pathological range on the Alienation subscale which suggests that almost half of the subjects in each group showed signs of having difficulty achieving closeness. Over 48.0% in each group (see Table 20) scored in the pathological range on the Insecure Attachment subscale, suggesting that almost half the subjects studied showed signs of lacking autonomy in relationships. Over 40% (see Table 20) in each group had pathologically elevated scores on the Social Incompetence subscale, suggesting that these high scoring individuals had difficulty feeling comfortable in social interactions, especially in interactions with males.

Summary of Hypothesis 6. There was no support for this hypothesis which stated that there would be differences among groups in the proportion of individuals scoring in the pathological range on each subscale of the BORT with the obese having the smallest proportion of clinically elevated scores in each case. There were no significant differences among groups in the proportion of individuals scoring above the pathological cutoff point for each BORT subscale. The obese group had the smallest proportion of clinically elevated scores in only two out of four of the subscales. These results indicate that there was little difference among groups in the proportion of subjects with disturbed object relations as measured by the BORT.

Post Hoc Correlational Analyses. Because it was suspected that the chronicity of an eating disorder and/or the length of treatment might effect how pathological a subject was, two types of correlational analyses were run. The first examined the relationship

Table 20

Percent of Individuals Scoring in Pathological Range on Bell Object Relations Test

Scale	Group				X^2
	O (n = 25)	NWB (n = 27)	BA (n = 35)	RA (n = 10)	
Alienation	44.0	44.4	65.7	50.0	3.90
Insecure Attachment	48.0	59.3	62.9	50.0	1.57
Egocentricy	20.0	37.0	37.1	20.0	3.06
Social Incompetence	44.0	40.7	40.0	40.0	.11

* .05, ** .01, *** .001.

between chronicity of illness and degree of psychopathology (as measured by raw score elevations on each scale and subscale of the BORT, EDI, and MCMI-II). The second examined the relationship between the length of treatment (measured in months) for the eating-disordered and the degree of psychopathology on each of the three measures.

There was a difference among groups in the length of time individuals had been eating-disordered. The number of years each individual had been eating-disordered was based on her responses to questions on the DSED-R about how long she had been bingeing, purging, and/or fasting to low weights. The number of years the normal-weight bulimics had been eating-disordered ranged from 1 to 17 years ($\underline{M}$ = 7.9 years) (see Figure 3). The number of years the bulimic anorexics had been eating-disordered ranged from 1 to 23 years ($\underline{M}$ = 5.9 years) (see Figure 3). The number of years the restricting anorexics had been eating-disordered ranged from 1 to 17 years ($\underline{M}$ = 5.8 years). Because of the apparent difference among groups an analysis of variance was run on the years in treatment with group membership as the source of variation. There was no significant difference among eating-disordered groups in the number of years individuals in each group had been eating-disordered, $\underline{F}(2, 69, \underline{N} = 72) = 1.35$, $\underline{p} \leq .26$.

Three sets of correlations one on each of the major measures used in this study, were run to investigate the relationship between chronicity of illness and level of psychopathology. On the BORT there was no significant relationship between severity of psychopathology in terms of score elevations on each subscale of the BORT and years in treatment (see Table 21). On the EDI there was a small significant

Table 21

Correlations Between Scales of the Bell Object Relations Test and Length of Eating Disorder

	Group		
	NWB	BA	RA
Scale			
Alienation	-.10 ($p \leq .30$)	.02 ($p \leq .46$)	-.13 ($p \leq .36$)
Insecure Attachment	-.09 ($p \leq .34$)	.13 ($p \leq .23$)	.05 ($p \leq .45$)
Egocentricity	-.22 ($p \leq .13$)	.07 ($p \leq .35$)	-.04 ($p \leq .46$)
Social Incompetence	.18 ($p \leq .18$)	.03 ($p \leq .43$)	.23 ($p \leq .26$)

Note. Raw scores were used in these computations. Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .012 (Harris, 1985).

positive relationship between score elevation on the Perfectionism subscale and chronicity of illness for the bulimic anorexic group accounting for about 8.0% of the variance between these two factors (see Table 22). The longer a subject in the bulimic anorexic group had been eating-disordered, the higher, more pathological was her Perfectionism subscale score.

On the MCMI-II there were three significant relationships between scale elevations and chronicity of illness for the normal-weight bulimic subjects. There was a small significant negative relationship accounting for about 12.0% of the variance between score elevation on the Narcissism scale and chronicity of illness (see Table 23). The longer a normal-weight bulimic had been eating-disordered, the less narcissistic she appeared. There was a small negative relationship accounting for 13.0% of the variance between score elevation on the Bipolar: Manic scale and chronicity of illness (see Table 23). The longer a normal-weight bulimic patient had been eating-disordered, the lower, less pathological was her score on a scale measuring symptoms of a bipolar mood disorder. There was a small negative relationship accounting for 11.0% of the variance between score elevation on the Delusional Disorder scale and chronicity of illness (see Table 23). The longer a normal-weight bulimic had had an eating-disorder, the lower her score on a scale measuring the presence of a delusional disorder.

For the restricting anorexics there was one significant relationship between scale elevation and chronicity of illness. There was a moderately strong negative relationship accounting for 34.0% of

Table 22

Correlations Between Subscales of the Eating Disorder Inventory and Length of Eating Disorder

	Group		
	NWB	BA	RA
Subscale			
Drive for Thinness	.08 (p = .34)	.02 (p = .46)	-.08 (p = .41)
Bulimia	.03 (p = .45)	.12 (p = .25)	-.09 (p = .40)
Body Dissatisfaction	.10 (p = .31)	-.07 (p = .35)	-.40 (p = .13)
Ineffectiveness	-.0009 (p = .50)	.10 (p = .29)	-.11 (p = .38)
Perfectionism	-.07 (p = .37)	.29 (p = .05)	.38 (p = .14)
Interpersonal Distrust	-.11 (p = .29)	-.18 (p = .16)	.03 (p = .47)
Interceptive Awareness	-.11 (p = .29)	-.08 (p = .33)	-.11 (p = .38)
Maturity Fears	.13 (p = .27)	-.24 (p = .09)	-.40 (p = .13)

Note. Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .006 (Harris, 1985).

Table 23

Correlations Between Scales of the Millon Clinical Multiaxial Inventory-II and Length of Eating Disorder

Scale	Group		
	NWB	BA	RA
Schizoid	-.03 ($p \leq .44$)	-.11 ($p \leq .26$)	.16 ($p \leq .33$)
Avoidant	-.16 ($p \leq .21$)	-.14 ($p \leq .20$)	-.06 ($p \leq .43$
Dependent	-.11 ($p \leq .29$)	.14 ($p \leq .22$)	.42 ($p \leq .11$)
Histrionic	-.22 ($p \leq .14$)	-.07 ($p \leq .34$)	-.24 ($p \leq .25$)
Narcissistic	-.34 ($p \leq .04$)	-.19 ($p \leq .14$)	-.40 ($p \leq .12$)
Antisocial	-.21 ($p \leq .15$)	-.25 ($p \leq .08$)	-.34 ($p \leq .17$)
Aggressive Sadistic	-.05 ($p \leq .40$)	-.23 ($p \leq .09$)	-.58 ($p \leq .04$)
Compulsive	.07 ($p \leq .36$)	.04 ($p \leq .40$)	.37 ($p \leq .15$)
Passive Aggressive	-.07 ($p \leq .37$) ,	-.07 ($p \leq .34$)	-.36 ($p \leq .15$)
Self-Defeating	-.16 ($p \leq .22$)	.02 ($p \leq .45$)	.06 ($p \leq .44$)
Schizotypal	-.13 ($p \leq .26$)	-.09 ($p \leq .31$)	-.20 ($p \leq .29$)
Borderline	-.19 ($p \leq .18$	-.15 ($p \leq .20$)	-.26 ($p \leq .23$)

Table continues

Table 23 (continued)

	Group		
	NWB	BA	RA
Scale			
Paranoid	-.28 ($p \leq .08$)	-.11 ($p \leq .26$)	-.34 ($p \leq .16$)
Anxiety Disorder	.04 ($p \leq .43$)	-.11 ($p \leq .26$)	-.29 ($p \leq .21$)
Somoatoform Disorder	-.003 ($p \leq .49$	-.18 ($p \leq .15$)	-.27 ($p \leq .22$)
Bipolar: Manic Disorder	-.36 ($p \leq .03$)	-.17 ($p \leq .17$)	-.43 ($p \leq .11$)
Dsythymic Disorder	-.10 ($p \leq .32$)	-.14 ($p \leq .21$)	-.17 ($p \leq .32$)
Alcohol Dependence	-.15 ($p \leq .22$)	-.15 ($p \leq .19$)	-.13 ($p \leq .36$)
Drug Dependence	-.22 ($p \leq .13$)	-.28 ($p \leq .052$)	-.26 ($p \leq .24$)
Thought Disorder	-.07 ($p \leq .37$)	-.02 ($p \leq .45$)	-.34 ($p \leq .17$)
Major Depression	-.12 ($p \leq .27$)	-.17 ($p \leq .17$)	-.24 ($p \leq .25$)
Delusional Disorder	-.33 ($p \leq .047$)	-.005 ($p \leq .49$)	-.28 ($p \leq .22$)

Note. Raw scores were used in computations.

Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .002 (Harris, 1985).

the variance between score elevation on the Aggressive-Sadistic scale and chronicity of illness (see Table 23). The longer a restricting anorexic had been eating-disordered, the lower, less pathological was her score on a test measuring the presence of passive-aggressive traits, or a passive-aggressive personality disorder. There were no other significant relationships between score elevation and chronicity of illness for any group on the MCMI-II.

The number of months each eating-disordered subject had been in therapy was based on the responses to DSED-R questions concerning recent and past inpatient and outpatient psychotherapy. Only 42 out of the 72 (58%) eating-disordered subjects indicated the length of treatment. Not all of the treatment for any one subject took place during one unbroken period of time. For most subjects who responded to questions about treatment duration, their treatment included at least three different segments of time spread out over three to 23 years. Since the DSED-R questions concerned only the most recent, second most recent, and the third most recent time periods of inpatient and of outpatient treatment, it is possible that some subjects had received more treatment than indicated. The number of months indicated by the 16 (out of 27) normal-weight bulimics answering the question about treatment duration ranged from 1 to 120 months (M = 17.9 months). The number of months indicated by the 17 (out of 35) bulimic anorexics who responded to the questions about duration ranged from 2 to 79 months (M = 18.5 months). The number of months indicated by the 8 (out of 10) restricting anorexics answering the questions about treatment duration ranged from 1 to 146 months (M = 45.0 months). The results of the

analysis of variance on the months in treatment with group membership as source of variation indicated that there was no significant difference among groups, $F(2, 39, N = 42) = 2.78$, $p \leq .07$ (see Table 5).

Three groups of correlations, one on each measure used, were run to investigate the relationship between length of treatment and level of psychopathology. On the BORT there were two significant relationships between the number of months an eating-disordered patient had been involved in psychotherapy and the level of psychopathology in terms of subscale score elevations. There was a moderately strong relationship accounting for 27.0% of the variance (see Table 24) between score elevation on the Insecure Attachment subscale and months in treatment for the bulimic anorexics. The longer a bulimic anorexic who had indicated her length of treatment had been involved in psychotherapy, the higher, more pathological was her score on a subscale which measures difficulties with separation-individuation or a lack of autonomy in relationships.

There was a moderately strong, positive correlation accounting for 49.0% of the variance between months in treatment and score elevation on the Social Incompetence subscale for the restricting anorexics. This suggests that the longer a restricting anorexic had been in treatment, the higher, more pathological were her scores on a subscale thought to measure discomfort in social situations. Eight out of ten restricting anorexics were involved in this correlational analysis.

On the EDI, there were three instances in which there was a relationship between length of treatment and score elevation. All

Table 24

Correlations Between Subscales of the Bell Object Relations Test and Length of Treatment

	Group		
	NWB N = 16	BA N = 17	RA N = 9
Subscales			
Alienation	.09 ($p \leq .37$)	.24 ($p \leq .18$)	.33 ($p \leq .19$)
Insecure Attachment	.13 ($p \leq .31$)	.49 ($p \leq .02$)	.40 ($p \leq .14$)
Egocentricity	.06 ($p \leq .42$)	.40 ($p \leq .06$)	.28 ($p \leq .23$)
Social Incompetence	.03 ($p \leq .45$)	.17 ($p \leq .26$)	.70 ($p \leq .02$)

Note. Raw scores were used in these computations.

Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .012 (Harris, 1985).

occurred among the restricting anorexics. There was a moderately strong positive relationship accounting for about 40.0% of the variance (see Table 25) between length of treatment and score elevation on the Interpersonal Distrust scale. This suggests that the longer a restricting anorexic had been in treatment, the higher was her scores on a subscale thought to measure mistrust of others. There was a moderately strong positive relationship accounting for about 45.0% of the variance (see Table 25) between months in treatment and score elevation on the Perfectionism scale. This suggests that the longer a restricting anorexic had been in treatment, the more perfectionistic she tended to be. There was a moderately strong relationship accounting for about 34.0% of the variance between months in treatment and score elevation on the Maturity Fears subscale. This suggests that the longer a restricting anorexic had been in treatment, the higher were her scores on a subscale thought to measure a desire to return to the safety of childhood.

On the MCMI-II, there were four significant relationships between months in treatment and score elevations, two among normal-weight bulimics and two among restricting anorexics. Among the normal-weight bulimics, there was a small positive relationship accounting for about 22.0% of the variance (see Table 26) between months in treatment and score elevation on the Compulsive scale and a small positive relationship accounting for about 18.0% of the variance (see Table 26) between the months in treatment and score elevation on the Thought Disorder scale. This suggests that the longer a normal-weight bulimic had been involved in psychotherapy, the more pathological were her

Table 25

Correlations Between Subscales of the Eating Disorder Inventory and Length of Treatment

	Group		
Subscale	NWB N = 16	BA N = 17	RA N = 9
Drive for Thinness	-.04 ($p \leq .44$)	.20 ($p \leq .22$)	.20 ($p \leq .30$)
Bulimia	.11 ($p \leq .35$)	.05 ($p \leq .43$)	.09 ($p \leq .41$)
Body Dissatisfaction	.13 ($p \leq .32$)	.31 ($p \leq .11$)	-.10 ($p \leq .40$)
Ineffectiveness	.03 ($p \leq .46$)	-.00 ($p \leq .50$)	.47 ($p \leq .10$)
Perfectionism	.32 ($p \leq .11$)	.24 ($p \leq .18$)	.67 ($p \leq .02$)
Interpersonal Distrust	.19 ($p \leq .24$)	.05 ($p \leq .42$)	.63 ($p \leq .03$)
Interoceptive Awareness	-.07 ($p \leq .41$)	.09 ($p \leq .36$)	.30 ($p \leq .22$)
Maturity Fears	.07 ($p \leq .40$)	-.22 ($p \leq .20$)	.58 ($p \leq .05$)

Note. Raw scores were used in computations.

Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .006 (Harris, 1985).

Table 26

Correlations Between Scales of the Millon Clinical Multiaxial Inventory-II and Length of Treatment

Subscale	Group NWB N = 16	BA N = 17	RA N = 9
Schizoid	.33 ($p \leq .11$)	-.03 ($p \leq .46$)	.56 ($p \leq .06$)
Avoidant	.29 ($p \leq .14$)	.03 ($p \leq .45$)	.44 ($p \leq .12$)
Dependent	.17 ($p \leq .27$)	.15 ($p \leq .28$)	.61 ($p \leq .04$)
Histrionic	-.24 ($p \leq .18$)	.25 ($p \leq .07$)	.51 ($p \leq .07$)
Narcissistic	-.03 ($p \leq .45$)	.07 ($p \leq .40$)	-.36 ($p \leq .17$)
Antisocial	-.05 ($p \leq .43$)	-.12 ($p \leq .32$)	-.12 ($p \leq .38$)
Aggressive-Sadistic	.14 ($p \leq .31$)	-.05 ($p \leq .43$)	-.45 ($p \leq .12$)
Compulsive	.47 ($p \leq .03$)	.38 ($p \leq .07$)	.24 ($p \leq .27$)
Passive-Aggressive	.08 ($p \leq .38$)	-.03 ($p \leq .46$)	.10 ($p \leq .40$)
Self-Defeating	.28 ($p \leq .14$)	.23 ($p \leq .19$)	.58 ($p \leq .05$)
Schizotypal	.22 ($p \leq .20$)	-.09 ($p \leq .36$)	.31 ($p \leq .21$)

Table continues

Table 26 continued

	Group		
	NWB N = 16	BA N = 17	RA N = 9
Borderline	.02 (p ≤ .48)	.08 (p ≤ .38)	.20 (p ≤ .31)
Paranoid	.28 (p ≤ .15)	.04 (p ≤ .44)	-.18 (p ≤ .32)
Anxiety Disorder	.17 (p ≤ .26)	.02 (p ≤ .47)	.10 (p ≤ .40)
Somatoform Disorder	.12 (p ≤ .33)	-.02 (p ≤ .47)	-.01 (p ≤ .49)
Bipolari Manic Disorder	-.19 (p ≤ .24)	-.03 (p ≤ .45)	-.31 (p ≤ .21)
Dysthymic Disorder	.09 (p ≤ .37)	.09 (p ≤ .36)	.22 (p ≤ .29)
Alcohol Dependence	-.03 (p ≤ .46)	.00 (p ≤ .50)	.28 (p ≤ .24)
Drug Dependence	-.08 (p ≤ .39)	-.14 (p ≤ .29)	.01 (p ≤ .49)
Thought Disorder	.43 (p ≤ .05)	-.09 (p ≤ .37)	.02 (p ≤ .48)
Major Depression	-.03 (p ≤ .46)	.08 (p ≤ .38)	.08 (p ≤ .42)
Delusional Disorder	.27 (p ≤ .16)	.07 (p ≤ .39)	-.19 (p ≤ .31)

Note. Raw scores were used in computations.

Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .002 (Harris, 1985).

scores on a scale measuring compulsivity and on another measuring the presence of a thought disorder.

There was a moderate positive relationship accounting for about 37.0% of the variance (see Table 26) between months in psychotherapy and score elevation on the Dependent scale and a small positive relationship accounting for about 29.0% of the variance (see Table 26) between months in psychotherapy and score elevation on the Self-Defeating scale. This suggests that the longer a restricting anorexic had been involved in psychotherapy, the higher, more pathological were her scores on scales measuring traits found in those with Dependent and Self-Defeating personality disorders.

CHAPTER IV

DISCUSSION

Brief Review of Theoretical Considerations and Study Findings

Ever since the earliest studies of eating disorders there has been an attempt to subdivide the eating-disordered into groups based upon symptoms and/or personality traits (Bruch, 1973; Dally, 1969; Feighner et al., 1972; Janet, 1903; la Tourette, 1885; Sours, 1980). The most recent studies contrast anorexics with bulimics (Garfinkle et al., 1980; Garner et al., 1985a, 1985b; Lepkowsky, 1987; Mickalide & Andersen, 1985; Norman & Herzog, 1983; Tracy et al., 1987). Anorexics are seen to be obsessive-compulsive, over-controlled (Solyom, Thomas, Freeman, & Miles, 1983; Strober, 1983) and socially withdrawn (Garfinkle et al., 1980; Garner et al., 1985a, 1985b; Lepkowsky, 1987; Piran et al., 1988; Tracy et al., 1987). Bulimics are seen to be histrionic, narcissistic, and impulsive, driven toward obtaining stimulation and affection (Garfinkle et al., 1985; Garner et al., 1985a, 1985b; Norman & Herzog, 1983; Lepkowsky, 1987; Piran et al., 1988; Tracy et al., 1987). According to this viewpoint, there is a relationship between the type of disordered dietary behavior(s) and the type of psychopathology exhibited. That is, certain types and levels of psychopathology are more likely to occur in some subtypes of eating disorders than in others.

However, there is another point of view. According to their

recent theoretical presentations, Masterson (1977), Swift and Stern (1982), and Johnson and Connors (1987), there is a spectrum of eating disorders, that is, "a closely related set of disorders with one or more underlying features" (Andersen, 1983, p. 15). According to this scheme there is no one-to-one relationship between disordered eating behavior and type of personality pathology or style. It is possible for a particular set of disordered eating behaviors to exist within every level of personality organization-neurotic, character-disordered, or psychotic. It is likewise possible for all kinds of psychopathology to exist within any subtype of eating disorder. However, there are common underlying features present in each subtype of eating disorder, too. Common underlying features include such characteristics as the fear of being fat, drive for thinness, etc.

Lack of appropriate, consistent primary care-giver responses to the infant's communications are thought to interfere in the development of healthy object-relations and the formation of inner structures for self-soothing and regulation (Bruch, 1962, 1973; Goodsitt, 1977; Lerner, 1983, 1986; Mahler et al., 1975). Disordered object relations are thought to be common in both anorexics and bulimics and to be one reason certain individuals are more vulnerable to developing an eating disorder than are others (Bruch, 1962; Friedman, 1985; Johnson & Connors, 1987; Masterson, 1977; Selvini-Palazzoli, 1974; Sugarman & Kurash, 1982; Swift & Stern, 1982). Lacking a firm sense of self and without the ability to soothe themselves and modulate emotions and drives, certain individuals with disordered objects relations turn to food for comfort.

The purpose of this study was to examine the type and level of psychopathology and disturbed object relations among three groups of eating-disordered women and a comparison group of obese females to see if specific associations existed among group, type, and level, or whether the same pattern of types and levels of psychopathology and object relations would emerge in each type of disorder. The results of the present study suggest that for this sample of eating-disordered females there was some homogeneity and some heterogeneity in the types and levels of psychopathology found within each subtype of eating disorder and that there were many ways in which the obese group appeared more similar to than different from the eating-disordered groups. Secondly, the eating-disordered groups were little different one from the other in type and level of object relations and only one difference emerged between the eating-disordered and the obese groups on object relations.

Differences among groups in the degree of psychopathology occurred most frequently between the obese and one or more of the non-obese eating-disordered groups. With one exception (the restricting anorexics did not show pathological levels of bulimic features), all groups had elevated subscale scores on the Eating Disorders Inventory (EDI), suggesting high levels of the psychological and behavioral traits commonly found among the eating-disordered.

There were a number of differences which occurred between an eating-disordered group and the obese group. The normal-weight bulimics had more pathological scores than the obese on the Drive for Thinness and Bulimia subscales. The bulimic anorexics had more

pathological scores than the obese on all the EDI subscales except the Perfectionism and Maturity Fears subscales. The restricting anorexics had more pathological scores than the obese on the Drive for Thinness subscale.

Fewer differences between eating-disordered groups were found. The normal-weight bulimics had higher mean subscale scores than the restricting anorexics on Drive for Thinness and Bulimia. The bulimic anorexics had more pathological scores than the normal-weight bulimics on Interoceptive Awareness and Drive for Thinness and a more pathological mean scale score than the restricting anorexics on the Bulimia subscale.

On the Millon Clinical Multiaxial Inventory-II (MCMI-II), which measures the presence of axis I and axis II mental disorders (DSM-III-R), the normal-weight bulimics had more elevated mean raw scale scores than the obese on the Antisocial, Alcohol Dependence, and Drug Dependence scales, indicating higher levels of pathology among the normal-weight bulimics. The bulimic anorexics had more elevated mean raw scale scores on the Dependent, Compulsive, Anxiety Disorder, Dysthymic Disorder, and Thought Disorder scales than did the obese. The restricting anorexics had more elevated mean raw scale scores than did the obese on the Schizoid, Compulsive, and Thought Disorder scales. The only differences in mean raw scale scores on the MCMI-II between groups traditionally classified as eating-disordered occurred between the restricting anorexics and the normal-weight bulimics. The restricting anorexics had more elevated mean raw scale scores on the Schizoid scale than did the normal-weight bulimics who, in turn, had

more elevated mean raw scale scores than the restricting anorexics on the Histrionic scale.

Concerning differences in the proportion in each group with clinically elevated scores on the MCMI-II scales, there were only two differences between eating-disordered groups. The bulimic anorexics had a larger proportion of subjects with clinically elevated scores than did the restricting anorexics on the Drug Dependence scale and a larger proportion of subjects with clinically elevated scores than the normal-weight bulimics on the Major Depression scale. (The latter was before the Yates correction). All other differences were between an eating-disordered group and the obese group. The normal-weight bulimics had a larger proportion of clinically elevated scores than did the obese on the Anxiety Disorder and Borderline scales. The bulimic anorexics had a larger proportion of clinically elevated scores than did the obese on the Anxiety Disorder, Borderline, and Major Depression scales. The restricting anorexics had a larger proportion of subjects with clinically elevated scores than did the obese on the Schizotypal and the Major Depression scales.

There was only one significant difference among groups in the level of disordered object relations. The obese group had a significantly lower mean scale score on the Egocentricity subscale than did each of the other groups. There were no differences among groups in the proportion of subjects scoring in the pathological range on any subscale of the Bell Object Relations Test (BORT).

The differences among groups on all three measures, the EDI, MCMI-II, and the BORT did not appear to be a function of age nor were they

strongly correlated with chronicity of illness. Using a subsample of the eating-disordered subjects, it appeared the longer some subjects had been in treatment, the more pathological were certain scores.

The eating-disordered groups appeared little different one from the other. However, there was some support for the contention of some researchers (Garfinkel et al., 1980; Garner et al., 1985a, 1985b; Lepkowsky, 1987; Norman & Herzog, 1983; Lepkowsky, 1987; Piran et al., 1988; Tracy et al., 1987) that the anorexic is more likely to be socially-constricted than the bulimic and that the bulimic is more strongly driven toward seeking interpersonal need-satisfaction than the anorexic. It should be noted that the differences between groups on the variables related to social constriction and interpersonal need-satisfaction did not occur between the same two groups in each case and that combining the bulimic groups led to erroneous conclusions. That is, the restricting anorexics appeared more socially constricted than the normal-weight bulimics because of their higher Schizoid raw mean scale score on the MCMI-II Schizoid scale. The normal-weight bulimics appeared more driven toward need-satisfaction than the restricting anorexics because of the higher mean raw scale score found in the normal-weight bulimics and the bulimic anorexics appeared more driven toward need-satisfaction than the restricting anorexics because of the larger proportion of bulimic anorexics than restricting anorexics with clinically elevated scores on the Drug Dependence scale. The findings concerning each hypothesis will now be reviewed in more detail, in sequence and comments about two post hoc groups of correlational analyses will also be presented.

Comments on Hypotheses 1, 2, and 3 and Related Issues

Hypothesis 1 (Part 1). This hypothesis stated that there would be differences among groups in the degree of psychopathology shown on different subscales of the EDI with the obese group having the lowest scores. (Lower scores indicate less pathology.) Differences among groups were not found on all eight of the subscales. The differences that did emerge did not form any particular pattern of relative severity of psychopathology among the eating-disordered groups.

In most cases the differences among groups on mean EDI raw scores make logical sense. The obese group, with the lowest mean score on Drive for Thinness, differed significantly from all the other groups. Their lower need to be thin is reflected in their larger body size. The greater need of the normal-weight bulimic, bulimic anorexic, and restricting anorexic to be thin is evidenced by the extreme measures (starvation, purging, etc.) taken to achieve their relatively smaller body sizes and lower weight.

Both bulimic groups (normal-weight bulimics and bulimic anorexics) had significantly higher mean Bulimia scores than either the obese or the restricting anorexics, with the restricting anorexics having the lowest means. Higher scores on Bulimia suggest a greater tendency to binge and/or vomit. The low mean Bulimia score found in the restricting anorexics supports their diagnosis as restricting anorexics as opposed to that of bulimarexics (anorexics who binge and purge). The relatively lower mean raw scale Bulimia score found in the obese group is understandable because nine out of 25 obese subjects denied ever bingeing and all denied the use of vomiting to regulate weight.

(The information about the disordered eating behavior came from the responses to the DSED-R questionnaire.)

The only other difference among the non-obese eating-disordered groups occurred on the Interoceptive Awareness subscale. This subscale measures difficulties recognizing and labeling emotions and feelings of hunger or satiety. Although all groups scored well above the normative female college group mean (Garner & Olmsted, 1984), the bulimic anorexics showed more pathology in this area than did the normal-weight bulimics. This finding differs from that of Garner and his associates (1985b) who found that the restricting anorexics they studied were less pathological in terms of Interoceptive Awareness than were bulimics with and without a history of anorexia. However, the authors admitted to having had technical problems with their study and were unable to replicate this finding using a larger sample. In another study (Garner et al., 1985a) there were no differences among bulimic and anorexic groups on Interoceptive Awareness. It appears likely, since there is no theoretical explanation for differences among eating-disordered groups in the ability to identify and express emotions and hunger-satiety related feelings, that any differences found among groups were artifactual. In each of the studies referred to and in the present study, the number of restricting anorexics was small and the standard deviations of the mean scale scores on Interoceptive Awareness, large.

The most frequent differences on the EDI were found between the bulimic anorexic and the obese groups. In addition to the differences on Drive for Thinness and Bulimia, the bulimic anorexic group had higher mean subscale scores (indicating higher levels of

psychopathology) than did the obese on the Ineffectiveness, Interpersonal Distrust, and Interoceptive Awareness subscales. According to these findings the bulimic anorexics felt more inadequate and out of control (higher Ineffectiveness score), more alienated, and more afraid of being close (higher Interpersonal Distrust score), and had more difficulty recognizing and labeling feelings (higher Interoceptive Awareness score), than did the obese. These differences remained even when the effect of age differences was removed.

There were fewer differences between the obese group and the normal-weight bulimic group and between the obese group and the restricting anorexic group. In the latter case, the failure to find more differences might be a function of the small sample size and large variability within the restricting anorexic group. Any real difference between groups would have had to be extreme in order to show up given the small sample size of the restricting anorexics. Fewer differences between the obese and the normal-weight bulimics is somewhat understandable since the obese are thought to be quite similar to normal-weight bulimics (Hawkins, Fremouw, & Clement, 1984; Marcus, Wing, & Hopkins, 1988; Wardle & Beinart, 1981) in terms of the affect, cognitions, and behavior related to binge-eating.

Hypothesis 1 (Part 2). This hypothesis stated that there would be differences among groups in the degree of psychopathology shown on different scales of the Millon Clinical Multiaxial Inventory-II (MCMI-II), with the obese showing the lowest scores, and hence, the least amount of psychopathology. Again, most of the differences occurred between the obese group and one of the other, non-obese, eating-

disordered groups, with the obese showing less pathology in all but one case. The only differences among the non-obese groups occurred between the restricting anorexic and normal-weight bulimic groups.

The normal-weight bulimic group had significantly higher mean raw scale scores than did the obese group on the Antisocial and Alcohol Dependence scales. The Antisocial scale is thought to measure traits which are common among people with an antisocial personality disorder. These traits include suspiciousness, low frustration tolerance, thrill-seeking, and vindictiveness. The personality style is active and independent. People with antisocial personality disorders usually depend upon themselves to obtain rewards but are not shy about taking what they need from others. The Alcohol Dependence scale is a Major Syndrome scale which is thought to measure behaviors common among alcoholics. Both the Antisocial and Alcohol Dependence scales include items which are endorsed by people with poor impulse control (Millon, 1987).

Poor impulse control has been noted in bulimics, both those with and those without a history of concurrent anorexia (Casper et al., 1980; Garfinkle et al., 1980; Garner et al., 1985a, 1985b). However, in the present study the normal-weight bulimics only had significantly higher mean raw scale scores than the comparison group of obese subjects on two of the three scales which measure the presence of impulsive behavior (Antisocial, Alcohol Dependence, and Drug Dependence scales) and the bulimic anorexics only scored higher than the obese on the Alcohol Dependence scale. Perhaps, as Johnson and his associates suggested (Johnson, Tobin, & Steinberg, in press), only a subgroup of

more disturbed bulimics have generalized problems with impulse control and as Garner and his associates (1985a) cautioned, not all bulimics exhibit poor impulse control in non-eating-related areas (such as substance abuse, stealing, and self-injurious behavior). Furthermore, in some of the studies (Garfinkle et al., 1980; Garner et al., 1985a, 1985b) the indices used for establishing poor impulse control included the use of alcohol more than once a month and whether or not the subject had ever used street drugs, not very exact measures of the extent to which an individual had problems with impulse control. In another study which compared levels of impulsivity among anorexics with those among bulimics (Strober, 1981), although a difference was found, the alpha level used was not very stringent ($p \leq .10$). Although there may be high levels of impulsivity among some bulimics, enough to contrast with levels found in comparison groups, the results of the present analysis suggest not all bulimics exhibit high levels of impulsivity in every area.

Again, the most numerous between group differences occurred between the bulimic anorexic and the obese groups. Even after controlling for the age differences which existed between these groups, the bulimic anorexics had significantly higher mean raw scale scores than did the obese on six scales: the Dependent, Compulsive, Anxiety Disorder, Dysthymic Disorder, Alcohol Dependence, and Thought Disorder scales. The Dependent and Compulsive scales contain items endorsed by individuals with dependent and/or compulsive personality disorders. Both scales are thought to measure personality styles of individuals who look to others for rewards and guidance. Those with a

passive-dependent orientation (with high scores on the Dependent scale) wait passively and submit to the guidance and wishes of others. Those with more compulsive traits (with high scores on the Compulsive scale) have more ambivalent feelings and their compliant, conforming behavior serves to control angry, oppositional feelings which they hide for fear of censure from others. Therefore, it appears likely that the bulimic anorexics in this study were more dependent upon others for rewards and guidance than were the obese.

Three other scales on which the bulimic anorexics showed greater levels of pathology than did the obese, the Anxiety Disorder, Dysthymic Disorder, and Alcohol Dependence Disorder scales, are all Clinical Syndromes. Clinical Syndromes are transient states which can result from stressful situations and can accentuate the personality style(s) characteristic of each individual (Millon, 1987). The Dysthymic Disorder scale contains items endorsed by depressed individuals who have low self-esteem and feelings of guilt and/or hopelessness. The Anxiety Disorder scale contains items endorsed by people plagued by apprehension. The Alcohol Dependence scale contains items endorsed by people with a history of alcoholism. Features of all three of these Clinical Syndromes can be found in the same individual and high scores on each of these scales frequently occur in individuals with a passive personality style (Millon, 1987).

Depression is a well-known feature in bulimics (Hudson, Latter, & Pope, 1982; Hudson, Pope, Jonas, & Yurgelun-Todd, 1983; Johnson & Larson, 1982; Pyle et al., 1981; Weiss & Ebert, 1983; Williamson et al., 1985). Although some researchers have suggested that depression

precedes the development of bulimia (Johnson & Larson, 1982; Strober & Katz, 1987) and others have hypothesized that bulimics may overeat in an attempt to reduce anxiety and/or depression (Loro & Orleans, 1981; Teusch, 1988; Williamson et al., 1985; Wilson, 1976), most have suggested that the bulimic behavior itself leads to or increases both anxiety and depression (Cooper & Fairburn, 1986; Garfinkel et al., 1980; Hatsukami, Mitchell, & Ekert, 1984; Kaye, Gwirtsman, Weiss, & Jimerson, 1986; Pyle et al., 1981). If the anxiety and depression preceded the bulimia and the bulimic behaviors were engaged in in an attempt to decrease negative emotions as some believe is true for the obese (Bruch, 1973; Squire, 1983; Stunkard, 1959, 1977), it does not appear that the use of food to help modulate feelings was as successful in this group of bulimics as it was in this group of obese individuals. If the anxiety and depression resulted from the bulimic behavior, this could help explain why levels of anxiety and depression were higher among bulimics than among the obese since not all of the obese in this sample were in the habit of bingeing and none of them admitted to purging.

Higher mean raw scale scores on the Alcohol Dependence scale in the bulimic anorexics as compared to the obese might again be a function of poorer impulse control among bulimics. Bulimics are noted for impulsivity (Casper et al., 1980; Garfinkel et al., 1980; Garner et al., 1985a, 1985b; Pyle et al., 1981). Bulimia might also be a type of addictive disorder which co-exists in individuals who have multiple addictions including alcoholism (Carroll & Leon, 1981; Mitchell et al., 1985; Pyle et al., 1981). Either theory might help account for

the differences among these two groups.

The bulimic anorexics also had more pathological scores than the obese on the Thought Disorder scale. High scores on the Thought Disorder scale of the MCMI-II indicate the presence of fragmented or bizarre thinking, social withdrawal, disorganized, regressive behavior, and sometimes, delusions and hallucinations (Millon, 1987). Some high scorers are diagnosed as schizophrenic, others as having a schizophreniform disorder (Millon, 1987). In studies using the MCMI-I, anorexics were found to have higher scores than the bulimics on the Thought Disorder scale (Lepkowsky, 1987; Tracy et al., 1987). Pathological thought organization among anorexics has been found by others (Bruch, 1973, 1974; Ferguson & Damluji, 1988; Selvini-Palazzoli, 1971; Small et al., 1981; Small et al., 1982; Strober & Goldenrod, 1981; Sugarman et al., 1982).

The consensus of opinion (Bruch, 1973; Johnson & Connors, 1987; Masterson, 1977; Sours, 1979, 1980; Swift & Stern, 1982) appears to be that while psychotic features may exist within an anorexic and even though there are anorexics who are also schizophrenic, the proportion of anorexics who are schizophrenic is small. However, the anorexic's belief that she is fat when she is actually emaciated is considered to be an example of disordered thinking. It appears from the results of the present study that some bulimics who have been anorexic also showed evidence of disordered thought, but did not differ significantly from bulimics who did not have a history of anorexia (normal-weight bulimics), only from an obese comparison group.

The restricting anorexic group had significantly higher mean raw

scale scores than did the obese group on the Schizoid, Compulsive, and Thought Disorder scales. The Schizoid scale is thought to measure traits common to individuals with a Schizoid personality disorder. Such individuals tend to be introverted, seclusive, and devoid of empathy for others. Their orientation is passive and detached. They have difficulty experiencing pleasure or pain and experience little in life that is rewarding. The Compulsive scale is thought to measure traits common to individuals with an obsessive-compulsive personality disorder. Such individuals tend to be over-conforming and to place high demands upon themselves and others. Behind the compliant front are angry, oppositional feelings that are occasionally acted out. Their orientation is passive and they alternate between relying on themselves and on others for rewards (Millon, 1981, 1987).

Traditionally, restricting anorexics have been characterized by social withdrawal (Garfinkle et al., Garner et al., 1985a, 1985b; Lepkowsky, 1987; Lesser, Ashenden, Delruskey, & Eisenburg, 1960; Norman & Herzog, 1983; Strober, 1983; Tracy et al., 1987), an important feature of a schizoid personality disorder, and by obsessive-compulsive traits (Bliss & Branch, 1960; Dally, 1969; Halmi, 1974; Palmer & Jones, 1939; Rothenberg, 1986; Solyam et al., 1983) which are fundamental to a compulsive personality disorder. Although this group of restricting anorexics did show evidence of schizoid and compulsive traits and had more pathological scores on the two scales measuring these traits than the obese, they only differed significantly from one of the other eating-disordered groups (the normal-weight bulimics) on one of these scales (the Schizoid scale).

The restricting anorexics also differed from the obese on the Thought Disorder scale. The restricting anorexics, as the bulimic anorexics, showed more evidence of disordered thought than did the obese. The comments pertaining to the bulimic anorexics would also pertain to the restricting anorexics. In addition, since one side-effect of starvation can be psychosis (Bruch, 1973), it is possible that the restricting anorexics are even more prone to psychotic features than are the bulimic anorexics. Again it is important to note that the Thought Disorder scores of the bulimic anorexic and restricting anorexic groups were not extreme enough to differentiate them from the normal-weight bulimic group on this scale.

The only difference which occurred between the eating-disordered groups on the MCMI-II occurred on the Schizoid and Histrionic scales. Since these are two of the scales on which differences were projected for Hypotheses 2 and 3, a discussion of these findings will follow in the next section.

Hypothesis 2. Hypothesis 2 stated that the restricting anorexics would exhibit a greater tendency toward social withdrawal than would the normal-weight bulimics and the bulimic anorexics as evidenced by higher scores on the Avoidant, Schizoid, and Schizotypal scales of the MCMI-II, all scales which tap modes of behavior characterized by social withdrawal. Social withdrawal has frequently been found among anorexics (Garfinkle et al., 1980; Garner et al., 1985a, 1985b; Lepkowsky, 1987; Lesser et al., 1960; Norman & Herzog, 1983; Strober, 1983; Tracy et al., 1987).

In a series of planned comparisons on the Avoidant and Schizotypal

scales, no differences were found among the eating-disordered groups. A series of planned comparisons on the Schizoid scales found no difference between the two bulimic groups on the Schizoid scale, but when the two bulimic groups were combined and compared to the restricting anorexic group, a significant difference was found. The restricting anorexics had higher scores, indicating greater pathology, on the Schizoid scale than appeared in the combined bulimic group. Given only the results of this last series of planned comparisons, one might have concluded that both bulimic groups were less Schizoid than the restricting anorexics. However, as part of the analyses on the MCMI-II scales undertaken in conjunction with the study of Hypothesis 2, post hoc Scheffe tests determined that the only significant difference among eating-disordered groups on the Schizoid scale occurred between the restricting anorexics (with more elevated scores) and the normal-weight bulimics. Thus, combining groups based on the shared symptom of bingeing could have resulted in the loss of a real difference between bulimic groups, in that only the normal-weight bulimics appeared less Schizoid than the restricting anorexics. The bulimic anorexics did not differ significantly from the restricting anorexics on the Schizoid scale.

Hypothesis 3. Hypothesis 3 stated that the bulimic anorexics and the normal-weight bulimics would show more signs of actively seeking interpersonal need-satisfaction than would the restricting anorexics as evidenced by higher mean raw scale scores on the Histrionic and Narcissistic scales of the MCMI-II. The Histrionic scale contains items endorsed by individuals with a histrionic personality disorder.

These individuals have an active-dependent orientation, that is, they look to others for rewards, actively trying to obtain their needs by manipulating those others. They appear to have an insatiable need for stimulation and affection. They project an external facade of confidence, but feel insecure and helpless inside. The Narcissistic scale contains items endorsed by individuals with narcissistic personality disorders. Such people have a passive-independent orientation; that is, they exploit others to obtain their rewards. They tend to feel superior to others and are optimistic.

A series of planned comparisons of the mean raw scale scores of the three groups on the Narcissistic scale found no differences among groups. A series of planned comparisons on the Histrionic scale found, first of all, that there was a difference between the two bulimic groups. However, since the hypothesis stated that there would be a difference between the two combined groups and the restricting anorexics, the normal-weight bulimic and bulimic anorexic groups were combined and compared to the restricting anorexic group. The combined bulimic groups scored significantly higher than the restricting anorexic group on the Histrionic scale. If only the second comparison had been instituted, one could have concluded that both bulimic groups were more histrionic than the restricting anorexic group. However, the results of the first comparison suggest the two bulimic groups were not the same and the Scheffe post hoc analysis done as part of the analyses of Hypothesis 1, part 2, showed that the only significant difference among eating-disordered groups on the Histrionic scale occurred between the normal-weight bulimics and the restricting anorexics. Again, this

is an example of how combining groups with similar disordered eating behavior and then comparing them with another group can lead to erroneous conclusions.

Both Tracy and his associates (Tracy et al, 1987) and Lepkowsky (1987) found higher scores on the Schizoid, Avoidant, and Schizotypal scales among anorexics than among bulimics and higher scores on the Narcissistic and Histrionic scales among bulimics than among anorexics using the MCMI-I. These differences lend support to the theory that some anorexics and bulimics differ in their orientation to need-satisfaction. According to this viewpoint, such anorexics experience little pleasure, refrain from actively seeking need-satisfaction, and withdraw from others while these kinds of bulimics actively seek stimulation and companionship.

However, in their studies, Tracy and his associates (Tracy et al, 1987) and Lepkowsky (1987) used an anorexic group that included both restricting anorexics and bulimarexics. The researchers in both studies admitted to the need for further investigation using more homogeneous groups. With the use of more homogeneous groups in the present study, the differences were less pervasive and more specific.

Although the differences in the style of need-satisfaction between restricting anorexics and the two bulimic groups examined in the present study were found on only two scales rather than on five, and were found in only two rather than in all three eating-disordered groups studied, differences were found and they were in the hypothesized direction. These differences suggest that for the present sample of restricting anorexics, there was a greater tendency toward

social withdrawal and constriction (as evidenced by a higher mean raw scale score on the Schizoid scale) than there was for the normal-weight bulimics and a greater tendency among the normal-weight bulimics than among the restricting anorexics to actively seek interpersonal need-satisfaction (as evidenced by a higher mean raw scale score on the Histrionic scale), at least as measured by these scales.

Summary of Comments Related to Hypotheses 1, 2, and 3

The differences among groups on the EDI appear to be more related to the particular type of disordered eating behavior engaged in by groups (e.g., higher scores on the Bulimia subscale in those who binge and purge, the normal-weight bulimics and bulimic anorexics) than to differences in psychological traits. Even though the obese group had significantly lower scores than the eating-disordered groups on most subscales, all groups showed evidence of the pathological cognitions and feelings (such as body dissatisfaction) that are commonly found among the eating-disordered.

Overall, the differences among groups on the MCMI-II suggest that while there is some tendency for certain types of psychopathology to be associated with certain subgroups based on the type of disordered eating behavior found in these subgroups (e.g., compulsivity and social withdrawal among the restricting anorexics) these types of psychopathology are not necessarily found in all members of these subgroups and they are found at some level in other subgroups. Furthermore, most differences occurred between the obese, comparison group, and one of the non-obese eating-disordered groups, not between two eating-disordered groups. When comparing eating-disordered groups

subdivided according to the type of disordered eating behavior engaged in, the types of classical psychopathology found in each group are little different from each other. There were two exceptions. The restricting anorexics showed a greater tendency to be socially withdrawn and constricted than did the normal-weight bulimics and the normal-weight bulimics showed a greater tendency to actively seek interpersonal need-satisfaction than did the restricting anorexics.

Hypothesis 4. Hypothesis 4 stated that there would be a difference among groups in the proportion of subjects scoring above the pathological cutoff points (i.e., in the clinical range) on the MCMI-II scales, with the smallest proportion in each case being found among the obese. The chi-square analyses and Fisher's Exact Probability Test analyses were carried out on three groups of MCMI-II scales: the Clinical Syndrome Scales, the Severe Personality Pathology Scales, and the Severe Syndrome Scales. Few significant differences were noted.

On the Clinical Syndrome Scales which measure neurotic or moderately severe syndromes, differences occurred on the Anxiety Disorder and Drug Dependence scales. Post hoc chi-square analyses found larger proportions of clinically elevated Anxiety Disorder scores among the normal-weight bulimics and the bulimic anorexics than were found among the obese. High levels of anxiety have been noted in bulimics (Casper et al., 1980; Grace et al., 1987; Johnson & Larson, 1982; Pyle et al., 1981; Williamson et al., 1985; Weiss & Ebert, 1983). Food consumption has been known to help reduce anxiety in some individuals (Beumont & Abraham, 1983; Cattanach, Phil, Malley, & Rodin, 1988; Loro & Orleans, 1981; Stunkard, 1976; Williamson et al., 1985;

Wilson, 1976). Perhaps the use of food to reduce stress was not as successful for the bulimics in this study as it was for the obese. It is also possible that these bulimics with a greater drive to be thin, became trapped in a cycle triggered in part by anxiety and then maintained by anxiety (Johnson, Lewis, & Hagman, 1984; Lacey, Coker, & Birtchnell, 1986). Because they feared being fat, they became involved in restrictive dieting which led physiologically to bingeing. A binge momentarily relieved hunger and anxiety, but the fear of becoming fat again led to more anxiety.

The other significant difference among the Clinical Syndrome Scales occurred on the Drug Dependence scale with the proportion of pathologically elevated scores being greater among the bulimic anorexics than among the restricting anorexics. Again, bulimics are thought to have poorer impulse control than anorexics (Casper et al., 1980; Garfinkle et al., 1985; Garner et al., 1985a, 1985b) and the use of illegal drugs is seen by many as an example of poor impulse control. The Drug Dependence scale contains items endorsed by those who are addicted to illegal drugs. However, caution is suggested when drawing any conclusions about the difference found between groups on the Drug Dependence scale. Only two out of 35 bulimic anorexics had pathologically elevated scores on the Drug Dependence scale and the mean base rate score for this group on this scale is only 55.1, well below the cutoff level of 74.0 (see Appendix O).

On the Severe Personality Pathology scales which measure "the most severe variants of personality pathology" (Millon, 1987, p. 327), there were significant differences on two scales, the Borderline and

Schizotypal scales. Borderline personality disorders are characterized by mood instability, impulsivity, and identity disturbance. This style of need-satisfaction is passive ("apathetic, restrained ... content to allow events to take their own course without personal regulation or control," Millon, 1987, p. 18). The results of post hoc chi-square analyses found significant differences on the Borderline scale between the two bulimic groups and the obese group. The proportion of clinically elevated scores among both the normal-weight bulimics and the bulimic anorexics was higher than among the obese. The presence of borderline personality disorders among bulimics has been documented in the literature (Cooper et al., 1988; Crisp, 1981; Johnson, Tobin, & Enright, in press; Levin & Hyler, 1986; Piran et al., 1988; Radant, 1987; Yates et al., 1989). However, Pope and his associates (Pope, Frankenburg, & Hudson, 1987; Pope & Hudson, 1989) felt borderline personality disorders have been over-reported in bulimics, in part, because the tests typically used to assess for this disorder have low specificity and may generate many false positives. However, the items on the MCMI-II Borderline scale have high specificity and were written to reflect the behaviors listed for borderline personality disorder on the DSM-III-R (APA, 1987). Pope and his associates (Pope et al., 1987; Pope & Hudson, 1989; Pope, Jonas, Hudson, Cohen, & Gunderson, 1983) also criticized the DSM-III-R (APA, 1987) criteria for the borderline personality disorder, saying that many of the symptoms overlap with those of major depression. They claimed that most of the bulimic clients they had seen who fit the DSM-III-R criteria for the borderline personality disorder were really depressed, not borderline,

and that the borderline symptoms disappeared after the clients began taking antidepressant medication. According to the MCMI-II manual, the intercorrelation between the Borderline and Major Depression scales on the MCMI-II is .68 and the percentage of overlap in items is 44%, lending some support for what Pope and associates (Pope et al., 1983; Pope et al., 1987; Pope & Hudson, 1989) contend. However, the High Depression/Anxiety Adjustment correction was applied to all the Borderline scale scores to try to reduce the effects of anxiety and depression on the Borderline scale scores (Millon, 1987).

The second difference among the Severe Personality Pathology Scales occurred on the Schizotypal scale. The schizotypal personality disorder, a more serious form of the schizoid and avoidant personality patterns, is found in individuals who are socially isolated and alienated and who exhibit eccentric behavior, thoughts, perceptions, and, at times, cognitions (Millon, 1981). According to the results of the Fisher's Exact Probability Test, there was a significantly greater proportion of individuals from the restricting anorexic group scoring above the pathological cutoff point on the Schizotypal scale than there was from the obese group. Anorexics have been known to distrust others (Kennedy & Garfinkle, 1989; Lesser et al., 1960; Levenkron, 1985) and to be socially isolated (Garfinkle et al., 1985; Garner et al., 1985a, 1985b; Lepkowsky, 1987; Lesser et al., 1960; Norman & Nerzog, 1983; Strober, 1983; Tracy et al, 1987). Pathological thought organization has also been found in anorexics (Bruch, 1973, 1974; Ferguson & Damluji, 1988; Selvini-Palazzoli, 1971; Small et al., 1981; Small et al., 1982; Strober & Goldenberg, 1981; Sugarman et al., 1982).

Therefore, it is not surprising that the restricting anorexics scored higher than the obese on the Schizotypal scale. What is surprising is that they did not differ from the two bulimic groups.

It should be noted that although there were no significant differences between the restricting anorexic group and either of the other eating-disordered groups on the Schizotypal scale, the normal-weight bulimic group and the bulimic anorexic group appeared more similar to each other than either was to the restricting anorexic group on the Schizotypal scale (see Table 17). About 14% of the normal-weight bulimics and 14% of the bulimic anorexics scored in the pathological range on the Schizotypal scale as compared to 40% of the restricting anorexic group.

Among the Severe Syndrome Scales, scales which measure disorders of marked severity, the only difference among groups occurred on the Major Depression scale. Post hoc chi-square analyses found differences between the restricting anorexics and the obese and between the bulimic anorexics and the obese. There were no obese subjects scoring within the pathological range on the Major Depression scale. Forty percent of the restricting anorexics and 42.9% of the bulimic anorexics scored in the pathological range (see Table 18).

Depression has been found among anorexics (Biderman, Baldessarini, Harmatz, Rivinus, Aran, Herzog, & Schildkraut, 1986; Halmi & Falk, 1982; Norman & Herzog, 1983). Both groups in this study who had anorexic experience also had large proportions of individuals with milder forms of depression as shown by the proportion in each group with clinically elevated scores on the Dysthymic scale. However, the

Major Depression scale taps behaviors and cognitions which are more serious, including vegetative signs, feelings of hopelessness and dread, suicidal ideation, and, at times, psychotic features such as poor reality testing. The greater seriousness of the depressive symptoms found in the two groups with anorexic experience (bulimic anorexics and restricting anorexics) may be related to the effects of starvation (which include psychotic features). Such features often disappear after proper nutrition has been restored (Garfinkle & Garner, 1982; Garner, Olmsted, Polivy, & Garfinkle, 1984; Herman & Polivy, 1980). More analytically-minded researchers suggest anorexic symptoms arise as a defense against anaclitic depression (Sugarman, Quinlan, & Devinis, 1981) and/or in relation to depression following separation (Masterson, 1977). Since this is a descriptive study and does not deal with etiological features, we do not know the source of the depression in these eating-disordered groups. However, it appears that depressive features were common among all of the eating-disordered groups in this study and that examples of Major Depression were more likely to exist among those who are or who have been anorexic and there is some theoretical support for these findings. Although there was not a significant difference between the proportion of individuals in the normal-weight bulimic group falling within the pathological range and the proportion in either the bulimic anorexic or the restricting anorexic groups on the Major Depression scale, the proportion in the normal-weight bulimic group was much less than in either of the other two groups. In the normal-weight bulimic group, the proportion was 18.5%. In the bulimic anorexic group, the proportion was 42.9% and in

the restricting anorexic group, 40.0% (see Table 18). In addition, the difference between the normal-weight bulimic and bulimic anorexic groups was significant before the Yates correction $X^2(1, N = 62) = 4.1$, $p < .04$).

Summary of Comments Related to Hypothesis 4

There were larger proportions of subjects in the normal-weight bulimic and bulimic anorexic groups with clinical signs of anxiety and a borderline personality disorder than there were in the obese group. The presence of both anxiety and borderline personality disorders has been found in bulimics in previous studies. However, some researchers believe many bulimics diagnosed as borderline are really depressed and that the symptoms of a borderline personality disorder disappear as soon as the depression is treated. There were larger proportions of subjects in the bulimic anorexic group than in the restricting anorexic group with clinical signs of drug dependency. However, this finding should be taken with caution as only two out of 35 bulimic anorexic subjects had clinically elevated scores on the Drug Dependence scale. There were higher proportions of subjects in the restricting anorexic group than in the obese group with signs of a schizotypal personality disorder. Schizotypal features have been found among anorexics in previous studies. There were larger proportions of subjects in the restricting anorexic and the bulimic anorexic groups than in the obese group with signs of clinical depression. Previous research has also found high levels of depression among those who engage in anorexic behaviors.

At times the bulimic anorexics were more similar to the normal-

weight bulimics than they were to the restricting anorexics (with smaller proportions in each bulimic group with pathologically elevated scores on the Schizotypal scale than in the restricting anorexic group, though the difference was not significant). At other times the bulimic anorexics looked more like the restricting anorexics with both groups who had been anorexic showing more evidence of clinical depression than did the normal-weight bulimics (though the difference was not statistically significant).

Hypothesis 5. Hypothesis 5 stated that there would be differences among groups in the degree of disordered object relations, as measured by the Bell Object Relations Test (BORT), with the obese group showing the least disordered object relations. Only one difference emerged. The obese group (with the lowest mean scale score, and hence, the least amount of pathology) differed from each of the non-obese eating-disordered groups on the Egocentricity subscale. All of the eating-disordered groups had more pathological mean raw scale scores on the Egocentricity subscale than did the obese group. High scorers on the Egocentricity subscale are thought to be self-centered, manipulative, and demanding (Bell, 1987).

Becker and her associates (Becker et al, 1987) found differences between purging and nonpurging bulimics on the Egocentricity subscale and on the Insecure Attachment subscale of the BORT. They found that the purging bulimics were more pathological than the nonpurging bulimics in their study. They did not use anorexics of any kind in their study. In the present study the bulimics were divided into two groups based on whether or not they had had a history of anorexia, not

on whether or not they purged. All of the bulimics in the present study purged. Using this classification system rather than the one employed by Becker and her associates (Becker et al., 1987), all of the eating-disordered groups, including the restricting anorexic group, appeared little different from each other. All were more pathological on Egocentricity than the obese group.

The second subscale on which Becker and her associates (Becker et al., 1987) found differences was the Insecure Attachment subscale. Although both the bulimic groups had mean scores in the clinical range on Insecure Attachment, they did not differ significantly from the other groups. Thus, although the findings support those of Becker and her group, that bulimics have difficulty with this aspect of object relations, this does not, as Becker suggested, appear to differentiate them from others.

High scorers on Insecure Attachment are thought to be overly sensitive to rejection, vigilantly looking for signs of disapproval. They have ambivalent feelings about being close and fear separations. These traits have been found in eating-disordered individuals thought to be suffering from a narcissistic disturbance (Armstrong & Roth, 1989; Goodsitt, 1977; Johnson & Connors, 1987; Lerner, 1983, 1986).

Hypothesis 6. Hypothesis 6 stated that there would be a difference among groups in the proportion of subjects scoring above the pathological cutoff points on each subscale of the BORT with the obese having the smallest proportion of cases in the pathological range on each subscale. Even though the smallest proportion of elevated scores was found among the obese or among the obese and one other group on

each subscale, no significant differences among groups were found. However, an inspection of Table 19 shows that there were moderate to high proportions of subjects scoring in the pathological range on Alienation, Insecure Attachment, and Social Incompetence for all of the groups, obese and non-obese eating-disordered, alike. In each group score elevations indicated that over 44% of the individuals had difficulty trusting others (pathological scores on Alienation), at least 48% were easily hurt and were sensitive to rejection (pathological scores on Insecure Attachment), and at least 40% felt shy and uncomfortable in groups and in interactions with the opposite sex (pathological scores on Social Incompetence). The failure to establish mature object relations is hypothesized to make some women more vulnerable than others to the development of an eating disorder (Johnson & Connors, 1987; Masterson, 1977; Swift & Stern, 1973). Other researchers have noted the presence of disordered object relations among the eating-disordered (Humphrey, 1986; Levin, 1986; Strauss & Ryan, 1987; Strober & Goldenberg, 1981; Sugarman & Kurash, 1982). However, little is known about the level of object relations among the obese. In a review of the literature on obesity, it was apparent that few researchers commented on issues connected with object relations. Stunkard (1977) said that the obese suffer from separation fears and Shainess (1979) said that unresolved symbiotic issues were common in the obese. Others have noted feelings of alienation among the obese (Williamson et al., 1985). However, Scott and Boroffio (1986) found that in the morbidly obese the sense of identity was better developed than in anorexics and bulimics. In the study by Becker and her

associates (Becker et al., 1987), an obese comparison group was not used. The results of the present study suggest that there were disordered object relations among a substantial proportion of the obese included in this study. Further investigation of the level of object relations development among the obese is suggested using larger samples and additional measurements.

Summary of Comments Related to Hypotheses 5 and 6

There was only one difference among groups on the subscales of the Bell Object Relations Test (BORT, 1982). On the Egocentricity subscale, the obese group had a significantly less pathological mean subscale score than did the other eating-disordered groups, suggesting the eating-disordered individuals were more preoccupied with themselves and more manipulative than the obese, at least as measured by this scale. However, difficulties with object relations as measured by the BORT were evident in all of the groups on the Alienation, Insecure Attachment, and Social Incompetence subscales. At least 44% of each group had difficulty trusting others, feared rejection, and felt uncomfortable in certain social situations.

Post Hoc Correlational Analyses

Two sets of post hoc analyses were run in order to try to determine whether or not there was a relationship between chronicity of illness and degree of psychopathology and if there was a relationship between length of treatment and degree of psychopathology.

There was no significant difference between eating-disordered groups in the mean length of time they had been eating-disordered (see

Table 4). However, because there was a great deal of variation within each group in the number of years subjects had been eating-disordered (see Figure 2), a series of correlations between length of disorder and scale elevations on the EDI, MCMI-II, and BORT were computed.

On the BORT there were no significant relationships between severity of psychopathology in terms of score elevations on each subscale and chronicity of illness (see Table 20). On the EDI, the longer a subject in the bulimic anorexic group had been eating-disordered, the higher was her scale elevation on the Perfectionism scale. However, the shared variance accounted for by this relationship was quite small (about 8.0%). Given the high mean raw Perfectionism scale score found among the bulimic anorexics, however, it is possible that perfectionism did help maintain the bulimic anorexic's eating disorder.

On the MCMI-II there were four sets of negative correlations between chronicity and degree of psychopathology. The longer a normal-weight bulimic had been eating-disordered, the lower were her scores on the Narcissism, Bipolar: Manic, and Delusional Disorders scales. However, the shared variances in each case were quite small, ranging from 11.0% to 13.0%, suggesting the relationships were quite weak. However, given the low mean raw scale scores on each of these scales (see Table 10), it seems unlikely that narcissistic characteristics or bipolar or delusional features in the normal-weight bulimics were related to whatever characteristics helped maintain the normal-weight bulimics' disordered eating behaviors. For the restricting anorexics, the longer a subject had been eating-disordered, the lower was her

score on the Aggressive-Sadistic scale. The shared variance in this case was higher (about 34.0%), suggesting a moderate negative relationship between chronicity and aggressive-sadistic traits. Although no causal relationship can be ascertained from the results of a correlational study, it seems unlikely that a chronic restricting anorexic subject in this study had aggressive-sadistic features which helped maintain her eating disorder. Further support comes from the relatively small mean raw scale score found in the restricting anorexic group on the Aggressive-Sadistic scale (see Table 10).

There was no significant difference in the number of months people in each group who responded to the questions about length of treatment had been treated for an eating-disorder (see Table 5). However, there were many problems associated with the analysis of the relationship between the months in treatment and the degree of psychopathology found in the eating-disordered individuals. First of all, the analysis was not based on the entire sample. Only 41 out of 72 (57.0%) of the eating-disordered subjects completed the questions about the length of their treatment. Secondly, some of the subjects' total number of months were based on many short periods of treatment spread out over a long period of time, others' totals were based on a number of short periods of treatment spread out over a short period of time, still others' totals were based on consecutive treatment sessions over a short period of time, while still others' treatment involved consecutive treatment sessions over a long period of time. The types of treatment in each case were not the same either, and included individual and group therapy and inpatient and outpatient treatment.

The differences related to the variety of kinds of treatment, which occurred during different time periods, is unknown, but undoubtedly play a role in the treatment outcome. Therefore, the results of the analyses of the relationship between degree of psychopathology and length of treatment should be interpreted with caution.

On the BORT, the longer a bulimic anorexic had been in treatment the more pathological was her score on the Insecure Attachment subscale. The relationship was moderately strong and suggests that for some of the bulimic anorexics studied, difficulties with separation-individuation seem to be related to how long a person has been in therapy. There was a strong positive relationship between the duration of treatment and the degree of pathology on the Social Incompetence scale for restricting anorexics. This suggests that the greater the restricting anorexic's feelings of discomfort in social situations were, the longer she had been in treatment.

On the EDI, there were moderately strong, positive relationships between the length of time a restricting anorexic had been involved in psychotherapy and the degree of pathology as measured by the Interpersonal Distrust, Perfectionism, and Maturity Fears subscales of the EDI. Since many factors (such as economic feasibility, motivation to change, etc.) affect how long a person is involved in psychotherapy, it is not possible to draw any firm conclusion from these findings. However, it is possible that many of the traits found in some of the eating-disordered subjects were enduring and not necessarily easy to alter even during longer term therapy.

On the MCMI-II, the higher the normal-weight bulimic's scores were

on the Compulsive and Thought Disorder scales, the longer the subjects had been in treatment. The relationships were moderately strong. Again, longer treatment was not necessarily related to lower levels of psychopathology.

Primary Characteristics Found in Each Group

In general, the eating-disordered groups appeared little different from each other and the obese group was characterized by some of the same kinds of psychopathology that were found among the eating-disordered. However, each group showed some distinguishing features and/or some specific patterns which characterized them. The obese women appeared to be well-educated and somewhat independent in terms of life style, while remaining psychologically dependent on others for need-satisfaction. They appeared to be somewhat masochistic, shy, and fearful of separation. The normal-weight bulimics, who appeared anxious and depressed, were of three general types: passive and dependent, histrionic, or mistrustful and avoidant. The bulimic anorexics, who appeared perfectionistic and self-critical, were also anxious and depressed, sometimes even clinically depressed. They also appeared to have difficulty actively satisfying their needs. The restricting anorexics who were of three types in terms of age, age of onset of illness, and chronicity of eating-disorder, appeared to be passive, constricted, socially withdrawn, and masochistic. A more complete discussion of each group follows.

Scales and subscales on which individuals in each group had relatively high scores were grouped together based upon the related

features measured by each. These groups of features were considered within the context of theories in which these features are most prominent. It would be desirable in future studies using larger samples to divide each group into specific character types.

Millon (1987) no longer employs a scoring system involving pathological cutoff points for the Clinical Personality Pattern scales (which include the following scales: Schizoid, Avoidant, Dependent, Histrionic, Narcissistic, Antisocial, Aggressive/Sadistic, Compulsive; Passive-Aggressive, and Self-Defeating). However, since the new, complex scoring system for these 10 scales which measure the presence of personality disorders is not available to the general public, and since the earlier MCMI-I studies of eating-disordered individuals used the pathological cutoff point of 74 on all scales, including those in the Clinical Personality Pattern group (see Table O), we will consider scores above 74 as indicating the presence of significant pathology. In all but six cases, the most important scales within the Clinical Personality Pattern group, the two with the highest base rate scale scores and those which are given the greatest weight in Millon's new scoring system (Millon, 1987), were above 74, anyway. In the six other cases, there were no base rate scale scores above 74 on any of the scales, suggesting that these six individuals were relatively free of psychopathology as indicated by either axis I or axis II (DSM-III-R) disorders.

Characteristics of the obese group. The 25 obese women were, for the most part, an older, very well-educated group with the highest divorce rate (20%) of all the groups and the largest percentage with

either no religious preference or membership in a non-traditional religion. This suggests that as a group the obese may have been less concerned about being conventional and/or pleasing others than were the other groups.

These women ranged in age from 19 to 43 years with a mean age of 30 years. Eleven were under 30 years and 14 were 30 years or older. Five were in their 40s. Seven were morbidly obese (at least 100 pounds overweight) and the others were from 20% to 71% overweight.

This well-educated group included 20% who had completed graduate school and another 16% who had attended or were attending graduate school. Only four percent of the obese had never attended college. They appear more independent than the eating-disordered females because the largest percentage of them lived alone (36%) and 52% were primary wage-earners. These percentages were higher than those found among the eating-disordered groups.

Just as the other eating-disordered females, they came primarily from urban areas in the Midwest (72%), over half (56%) were from the upper three socioeconomic classes (see Table 6), and most (92%) took part in the study following requests by their therapists (see Table K). Just as the eating-disordered individuals, all were in therapy, with 12% of the obese either in the hospital at the time of testing or having been hospitalized previously for mental disorders (and/or eating-related problems) (see Table 3). A greater proportion of the obese than of the eating-disordered individuals were taking psychotropic medications at the time of testing. Twelve percent were taking antidepressants, eight percent antipsychotic medication, and

four percent tranquilizers (see Table 3).

Even though the degree of disturbance among the obese group was not as great as that in the normative population of anorexics (Garner & Olmsted, 1984) or in the other, eating-disordered groups included in the present study, their scores on the Eating Disorders Inventory (EDI) suggest that this group of obese females exhibited some of the psychological and behavioral characteristics found in anorexics and bulimics. Their mean scores on all subscales of the EDI were above those of both the normative population of non-eating-disordered college students and above those of the normative population of morbidly obese females referred to in the EDI manual (Garner & Olmsted, 1984).

Despite the pathology related to eating which was found in these obese subjects, their levels of the more traditional types of psychopathology were lower than in the other, more traditionally considered eating-disordered groups. There was only one mean base rate scale score over 74.0 (the pathological cutoff point) among the obese, compared to four in the normal-weight bulimic, six in the bulimic anorexic, and four in the restricting anorexic groups on the Millon Clinical Multiaxial Inventory-II. However, difficulties with object relations were found among the obese.

Though the obese group appeared highly independent, they still showed signs of being overly concerned with and/or dependent upon the reactions of others toward them for their sense of well-being. There was also evidence of disordered object relations, including signs of mistrust, separation fears, and shyness among the obese, as well as masochistic tendencies. Concern about how others value an individual

is measured by two of the MCMI-II personality disorders scales on which the obese group had relatively high mean base rate scores (over 70.0), the Histrionic and the Passive-Aggressive scales (see Table 0). In addition, 48% of the obese had clinically elevated scores on the Insecure Attachment subscale of the Bell Object Relations Test (BORT) (see Table 20). People scoring in the clinical range on this subscale are depicted as sensitive to rejection and therefore careful not to offend others. Mistrust of others was shown by the large proportion of the obese group (64%) with relatively high base rate scores (over 74.0) on the Avoidant scale of the MCMI-II (see Table 0) and by the large proportion (48%) with clinically elevated scores on the Alienation subscale of the BORT (see Table 20). Both scales contain items endorsed by people who actively withdraw from others because of mistrust. Masochistic tendencies were evident as 64% of the obese had base rate scores at or above 74 on the Self-Defeating scale of the MCMI-II (see Table 0). Individuals with high scores on this scale tend to encourage others to exploit them, actively recall past misfortunes and stress their faults rather than their strengths (Millon, 1987). Shyness and discomfort in groups was evidenced by a sizable number (44%) of obese individuals with clinically elevated scores on the Social Introversion scale of the BORT (see Table 20).

The obese were not highly anxious (only 16% had pathologically elevated scores on the Anxiety Disorder scale) or depressed (only 36% had pathologically elevated scores on the Dysthymic Disorder scale (see Table 17) and none had elevated Major Depression scale scores on the MCMI-II) (see Table 19). The low levels of anxiety and depression may

have been a function of their use of food to regulate mood and soothe themselves.

Summary of Comments on the Obese

For the most part, the obese group was made up of older, well-educated, affluent, and independent individuals. They seemed, nonetheless, overconcerned about others' opinions of them and they appeared dependent on others for rewards. They showed moderately high levels of pathology on the Eating Disorder Inventory (EDI), a measure which taps psychological and behavioral traits commonly found in anorexics and bulimics, but less psychopathology on a measure of more traditional mental disorders, the Millon Clinical Multiaxial Inventory-II (MCMI-II). There was also evidence of disordered object relations, including signs of mistrust, separation fears, and shyness within this group, and masochistic tendencies, at least as measured by the scales used in this study. Levels of anxiety and depression were quite low.

Characteristics of the normal-weight bulimic group. The 27 normal-weight bulimics ranged in age from 18 to 35 years with a mean age of 25.7. According to information presented on Table 6, over half (59.3%) were from metropolitan areas in the Midwest. The next largest group (18.5%) came from the mountain west. About half (51.9) were students and over half (63%) had had at least some college education. About a fourth (29.9%) were primary wage-earners and over half (58%) were in the upper three socioeconomic classes which include professional and upper management positions. Over half (55.6%) had never been married and about a fourth (25.9%) were married for the first time. Their religious preferences were fairly evenly distributed

among Roman Catholic, Protestant, and the other/no religious preference categories. According to Table 3, at least a third (37%) were or had been hospitalized with eating disorders and at least 22.2% were taking antidepressants when tested. The majority (about 96.3%) were volunteers who took part in this study in response to their therapists' requests (see Table K).

The normal-weight bulimic group tended to fit the standard pattern of an eating-disordered individual found among the normative sample of the EDI. As a group, there was a strong drive to be thin and an even greater dissatisfaction with body shape and size. The normal-weight bulimics were perfectionistic and felt unable to live up to their own and others' expectations (high mean score on Ineffectiveness). They tended to distrust others (high mean score on Interpersonal Mistrust), to have difficulty identifying and expressing feelings (high mean score on Interoceptive Awareness), and to have some desire to escape adult responsibilities (moderately high mean score on Maturity Fears).

Looking at the MCMI-II scales and BORT subscales on which the normal-weight bulimics had the highest scores, three different patterns emerged. It appears that a large proportion of normal-weight bulimics tended to be passive and to depend upon others for self-definition and rewards. Masochistic trends were also suggested. Their mean base rate scores were above 74 on the Passive-Aggressive and Self-Defeating scales of the MCMI-II and there were moderately high proportions scoring this high or higher on both of these scales (74.1% on the Passive-Aggressive, and 77.8% on the Self-Defeating scales) (see Table O). Pathological scores on the Insecure Attachment scale of the BORT

also support this view of the normal-weight bulimics as dependent upon others and masochistic. Almost 60% (59.3%) scored in the pathological range on the Insecure Attachment subscale of the BORT (see Table 20). Individuals scoring in the pathological range on this subscale are thought to worry a great deal about whether they are liked and accepted by others and often are passive-aggressive or masochistic (Bell, 1987).

Although it appears a large proportion of the normal-weight bulimics were passive and dependent (see above), some of them were active and dependent (63% scored above 74 on the Histrionic scale (see Table O) and 57.9% scored in the pathological range of the Borderline scale) (see Table 18). Just as the other normal-weight bulimics, they appeared to look to other individuals for rewards, but were more active in their attempts to obtain need-satisfaction, often manipulating others to meet their needs. Persons who score high on one or both of the above scales also often have difficulty delaying gratification and are often either emotionally excitable or labile (Millon, 1981).

A third pattern emerged among some of the normal-weight bulimics. There appeared to be a tendency for some normal-weight bulimics to avoid interpersonal interactions because they distrusted others. Sixty-three percent of the normal-weight bulimics scored above a base rate score of 74 on the MCMI-II Avoidant scale (see Table O) and 44% scored in the pathological range of the Alienation subscale of the BORT (see Table 20).

A moderately high proportion of normal-weight bulimics were anxious and/or depressed (48.1% scored in the pathological range on either or both of the Dysthymic Disorder and Anxiety Disorder scales of

the MCMI-II) (see Table 17). Not many normal-weight bulimics (18.5%), however, scored in the pathological range on the Major Depression scale, suggesting that the type of depression experienced by about half of the normal-weight bulimics was a more long-term, characterological depression as opposed to a severe, reactive type of depression (Millon, 1987). The presence of higher levels of anxiety and depression among the normal-weight bulimics than among the obese is consonant with the view of bulimia as a cycle which begins in anxious and depressed individuals undergoing restrictive dieting and is maintained by alternations of positive and negative mood states and the bingeing that follows nutritional deprivation (Johnson et al., 1984; Lacey et al., 1986).

Although this group of bulimics appeared more impulsive than the obese group, they did not appear to be extremely impulsive, at least according to their use of addictive substances other than food. Only 11.1% scored in the pathological range on the Alcohol Dependence scale and only 7.4% scored in the pathological range on the Drug Dependence scale of the MCMI-II (see Table 17).

About 50% of the normal-weight bulimics appeared to have the characteristics found in a borderline personality disorder (51.9% scored in the pathological range on the MCMI-II Borderline scale) (see Table 18). Pope and his associates (Pope et al., 1987; Pope & Hudson, 1989) suggested that many who fit the DSM-III-R criteria for borderline personality disorder are really only depressed. However, the High Depression/Anxiety Adjustment has been applied to all the Borderline scale scores (Millon, 1987), which should have removed the distorting

influence of the high Anxiety and Dsythymic scale scores on the Borderline scores. There is also additional support for the hypothesis that this group of normal-weight bulimics have borderline characteristics. Individuals with pathologically elevated scores on both the Alienation and Insecure Attachment subscales of the BORT are likely to be borderline (Bell, 1987). About a third (33.3%) of the present population of normal-weight bulimics had pathologically elevated scores on both of these scales (see Table Q).

Root, Fallen, and Frederick (1985) have stated that many bulimics they have worked with appeared to be borderline only while actively bingeing and purging, but that once the disordered eating behaviors subsided, the individuals no longer looked borderline. The physiological effects of bulimia are thought to increase lability of mood and depression, features of the DSM-III-R borderline personality disorder which are said to decrease after eating habits are normalized (Root et al., 1985). Yates and his associates (Yates et al., 1989) also commented upon whether or not a high percentage of bulimics might also have borderline personality disorders when they said, "bulimia may accentuate personality traits..." and "reestablishing normal eating patterns may result in an improvement in the personality disorder...." (p. 59). Since there is no follow-up component to the present study there is no way to determine whether or not what Root and her associates (Root et al., 1987) and Yates and his associates (Yates et al., 1989) have said appears to be true.

Summary of Comments on the Normal-weight Bulimics

About half of these normal-weight bulimics appeared anxious and/or depressed, although very few appeared to suffer from a Major Depression. Depression and anxiety are important features of the bulimic cycle which can be set into motion by restrictive dieting among anxious and/or depressed individuals and then perpetuated by anxiety and depression following bingeing and/or purging. The presence of three personality types was suggested in the normal-weight bulimics. The first type was characterized by passivity and the turning to others for self-definition and reward. The second style was characterized by impulsivity and lability of mood and by more active attempts to obtain need-satisfaction through the manipulation of others. The third pattern was characterized by the avoidance of others because of mistrust. Borderline personality features were also found in a moderately large proportion of these normal-weight bulimics although these features might be related more to symptoms of depression and anxiety than to pervasive, enduring character pathology.

Characteristics of the bulimic anorexic group. The 35 bulimic anorexics ranged in age from 15 to 43 years of age (m = 35.0 years). According to information presented in Table 6, the largest proportion (71.4%) came from metropolitan areas in the Midwest and the next largest proportion (17.1%) came from metropolitan areas on the East coast. Almost half (45.7%) had some undergraduate college experience and 17.2% had either attended or completed graduate school. Almost equal numbers were primary wage earners (40.0%) or students (37.1%). The largest percentage (74.3%) had never been married and 17.1% were

married for the first time. Most lived with their parents (34.3%) or a roommate (28.6%). Moderately affluent as a whole, 76% belonged to one of the three highest socioeconomic classes which includes professionals and those in upper management. The majority were Roman Catholic (60.0%). According to Table 3, over half (57.1%) were or had been hospitalized for an eating disorder and a fairly small percentage (from 2.9% to 8.6%) were taking psychotropic medication when tested. The largest proportion (almost 94.2%) took part in the study at the request of their therapists (see Table K).

The bulimic anorexics' profile on the EDI fit the pattern of anorexics, but was somewhat more extreme, with six out of the eight mean subscale scores at or above the highest range of scores typically found in the eating-disordered. Their three highest mean subscale scores occurred on Body Dissatisfaction, Drive for Thinness, and Interoceptive Awareness. Highly perfectionistic and self-critical (high scores on Perfectionism and Ineffectiveness), it appears that the high levels of perfectionism may have helped maintain their eating disorders. There was a relationship between subscale severity on Perfectionism and chronicity of the eating disorder.

Scores on the BORT suggest the presence of disordered object relations among at least half of the bulimic anorexics. Over half (65.7%) had elevated Alienation scores (see Table 20), which suggests that this group had difficulty trusting others and forming intimate relationships (Bell, 1987). Over half (62.9%) had elevated Insecure Attachment scores (see Table 20), which suggests a marked sensitivity to rejection and difficulty tolerating separations. Over half (51.4%)

had elevated scores on both Alienation and Insecure Attachment (see Table Q), suggesting the presence of borderline personality features, including difficulties with separation and individuation.

Judging by the pattern of clinically elevated scores on the MCMI-II scales measuring personality styles and on the BORT subscales, the bulimic anorexic group was characterized by the inability to actively seek gratification and was at times either engaged in masochistic behavior or avoided even trying to obtain rewards for fear of being hurt by others. The difficulty actively obtaining need-satisfaction was suggested by the passive orientation of those who had elevated scores on the Dependent (62.9%) and Self-Defeating (80%) scales of the MCMI-II as well as by those who appeared to be passive-aggressive (with elevated scores) on the Passive-Aggressive scale (60.0%) (see Table O). Masochistic trends were suggested by the proportion of base rate scores over 74 on the Self-Defeating (80%) (see Table O) and Borderline (42.0%) (see Table 18) scales of the MCMI-II and by the proportion of people who had pathological scores on both Alienation and Insecure Attachment on the BORT (51.4%) (see Table Q). The movement away from others because of mistrust and the fear of being hurt was suggested by the proportions of elevated scores on the MCMI-II Avoidant scale (80.0%) (see Table O) and the BORT Alienation scale (65.7%) (see Table 20).

As a group these bulimic anorexics also appeared anxious and depressed. Over half (51.4%) (see Table 17) had scores in the pathological range on the Anxiety Disorder scale of the MCMI-II. Over half (65.7%) (see Table 17) had pathologically elevated scores on the

Dysthymic Disorder scale and 42.9% (see Table 19) had pathologically elevated scores on the Major Depression scale. The presence of anxiety and depression in this group is not surprising. Their EDI profiles suggest they were highly perfectionistic and self-critical, looking to others for affirmation. It is likely they tended to worry a great deal about making mistakes and displeasing others. Being unaccustomed or unable to actively satisfy their needs could have led to feelings of self-reproach and helplessness, characteristics of depressed individuals. In addition, the cycle of bulimic behavior appears to include anxiety and depression (Johnson et al., 1984; Lacey et al., 1986). The high proportion of people with clinically elevated scores on the Major Depression scale underlines the more serious nature of the depression suffered by this group.

Summary of comments on the bulimic anorexics

The bulimic anorexics appeared to fit the typical profile of behavioral and psychological traits found in bulimics and anorexics, fear of becoming fat, perfectionism, a sense of ineffectiveness, etc. They showed signs of having difficulty actively satisfying their needs and some even appeared to allow others to exploit them. Disordered object relations and borderline personality features were suggested by high scores on scales measuring the tendency to avoid others because of mistrust and to have problems with separation-individuation. Highly perfectionistic and self-critical, at least half of the bulimic anorexics appeared anxious and/or depressed and almost half were clinically depressed.

Characteristics of the Restricting Anorexic Group. The 10

restricting anorexics ranged in age from 17 to 33 years of age with a mean of 24.7 years. These anorexic subjects did not all fit the stereotype of anorexics who are younger and begin showing symptoms earlier than bulimics (Neuman & Halverson, 1983). There appeared to be three groups in terms of age, age of onset, and chronicity. There was a group of younger anorexics who had been eating-disordered up to three years (4 subjects), a group of older subjects who had been anorexic 7 to 17 years (4 subjects), and a group of older subjects who had been anorexic under three years (2 subjects) at the time of their testing.

According to information presented in Tables 3 and 6, 70.0% had never been married and 30.0% were married for the first time. The large number of single females, 40.0% of whom still lived at home with their parents, is not too surprising considering half the restricting anorexics were under 25 years of age. The marital status of the majority might also be a reflection of the debilitating effects of the illness. Support for this hypothesis comes from the data on hospitalization. Eighty percent of these restricting anorexics were or had been hospitalized for anorexia and three out of the four older, more chronic anorexics had been hospitalized at least four times each. The debilitating nature of the illness may also be reflected by the small number of subjects in this group who were self-supporting (only 1). This apparent dependency may also have been a function of the large number of students in the group (6 out of 10) and of the youth of half the group. Another possible sign of the debilitating nature of their illness was that although half the restricting anorexics were over 25 years of age, only one had graduated from college. Ninety

percent of the restricting anorexics were in the highest three socioeconomic classes and it is not unreasonable to expect larger numbers of affluent, white females to complete college than appeared within this group. Thus, it appears that this group of restricting anorexics, or at least part of it, was atypical, since it contained many older females and two whose eating disorders did not begin until age 30. Kiecolt-Glasser and Dixon (1984) suggested that anorexia nervosa which occurs or persists into adulthood may represent a more severe kind of psychopathology than it does in adolescence (in Steiger et al., 1989).

Again, according to information presented in Tables 3 and 6, 70.0% of the restricting anorexics came from metropolitan areas in the midwestern parts of the United States and Canada, although others came from the southern and eastern sections of the United States. Half of the restricting anorexics were protestant, two were Roman Catholic, one Jewish, and one was without religious preference. A large proportion (80%) took part in the study after being asked to participate by their therapists. Two responded to advertisements in eating-disorders newsletters (see Table K).

The restricting anorexics in this study appeared to fit the typical pattern of scores found in eating-disordered individuals (Garner & Olmsted, 1984) on the Eating Disorders Inventory (EDI). Fitting the traditional profile, they were perfectionistic, afraid of becoming fat, dissatisfied with their body shapes/sizes, felt ineffective, had difficulty identifying emotions and satiety states, mistrusted others, and wished to return to the relative safety of

childhood. Only the Bulimia score was in the normal range. This is to be expected since only two restricting anorexics admitted to bingeing and none admitted to vomiting in order to lose weight (according to DSED-R responses).

Given the diversity of this group in terms of age, age of onset of illness, and chronicity of illness, it is not surprising to find heterogeneity of types and levels of psychopathology among these restricting anorexics. This diversity is evidenced by the large variance found on the EDI and MCMI-II scales. However, the differences from the other eating-disordered groups and the pattern of scores which fell in the pathological range on the MCMI-II suggest that this eating-disordered group could be characterized by the following characteristics: passivity, social withdrawal, constriction, anxiety, depression, and masochism.

Less histrionic and more schizoid than the normal-weight bulimics and with a larger proportion of individuals showing schizotypal features than was found among the bulimic anorexics, a large proportion of this group of restricting anorexics appeared to withdraw from others and to refrain from an active pursuit of need-satisfaction. Passive and somewhat masochistic (60% [see Table 0] had base rate scores of over 74 on the Self-Defeating and Dependent scales and 40% [see Table 18] on the Borderline scale of the MCMI-II), it appears a large proportion of the restricting anorexics were not only unable to ask others for what they wanted, they were often exploited by them.

Anxious (40% [see Table 17] had elevated Anxiety Disorder scales) and depressed (40% [see Table 17] had elevated Dysthymic and 70% [see

Table 19] had elevated Major Depression scale scores), this group appeared to find little in life which was rewarding (60% also had elevated Avoidant and 40% had elevated Schizoid scales [see Table O]). Pathologically elevated scores on the Compulsive scale (in 60% [see Table O] of this group) suggests these restricting anorexics tried to bind their anxiety through the use of control and self-discipline. The absence of any subjects with pathologically elevated scores on the Alcohol Dependence and Drug Dependence scales also suggests self-control.

There were signs of unconventional, tangential and/or bizarre thinking among the restricting anorexics. Forty percent (see Table 18) had pathologically elevated base rate scores on the Schizotypal scale. High scorers on this scale are thought to be cognitively confused or unconventional in their thinking. Twenty percent (see Table 19) had pathologically elevated scores on the Thought Disorder scale. High scorers on this scale often have disordered, bizarre thoughts. Although 20% is a small proportion, it is the highest proportion among all of the groups studied.

Summary of Comments on the Restricting Anorexics

Although the restricting anorexics were of three types in terms of age, age of onset of illness, and chronicity of the eating-disorder, it appears that a large proportion of them tended to be perfectionistic and to feel ineffective, anxious and depressed. They appeared passive, constricted, socially withdrawn and somewhat masochistic. This description is very similar to the traditional portrayal of the primary anorexic (Bruch, 1962, 1973). In addition, there were indications of

the presence of unconventional, tangential, and/or bizarre thinking among the restricting anorexics.

Treatment Implications

It seems evident from the results of these analyses and of other studies (Andersen, 1988; Johnson & Connors, 1987; Masterson, 1977; Strober, 1980; Swift & Stern, 1982; Thompson, 1988) that there is a spectrum of eating disorders, that is, "a closely related set of disorders with one or more underlying features" (Andersen, 1988, p. 15). It appears that within this spectrum of eating disorders there is a degree of variability among individuals within and across subgroups and not a one-to-one relationship between disordered eating behavior and type of personality pathology or style. Therefore, as Thompson (1988) stated, it would seem very important to thoroughly evaluate each eating-disordered female patient presenting for treatment no matter what the presenting symptoms and historical weight before beginning treatment. The high incidence of character pathology (as evidenced by the percentage of subjects with elevated scores on the MCMI-II scales measuring personality disorders) and the strong evidence of disordered object relations (as measured by the pathologically elevated scores on the BORT) also indicates the advisability of including a thorough assessment of the character structure of eating-disordered patients during their evaluations.

One might speculate that a large number of the eating-disordered subjects in this study (and a fair number of obese individuals, too) suffered from narcissistic injuries which created "self-pathology" (Kohut, 1971). Such narcissistic disturbances occur when a person has

failed to "differentiate herself and her inner processes from others" (Goodsitt, 1977, p. 305). The basic characteristics of such disturbances include a lack of cohesive sense of self and others, fragile self-esteem, a lack of internal structures for self-soothing, regulation, and organization, and high levels of anxiety and depression, especially when the narcissistically-injured patient is faced with separation (Barth & Wurman, 1986; Goodsitt, 1969, 1977; Johnson & Connors, 1987; Lerner, 1983, 1986; Levenkron, 1985). It would appear that Goodsitt's (1977) and Lerner's (1983, 1986) narcissistically-injured eating-disordered patients would fit into this category as well as Swift and Stern's (1983) "false-self" and "empty-understructured" anorexics and Johnson and Connor's (1987) "false-self" bulimics and anorexics.

Baker and Baker (1987) have described Kohut's three types of individuals with "self-pathology." In the first group are those with "merger-hungry personalities" (p. 104). This group appears similar to the group of subjects in the present study who have high score combinations on the following MCMI-II scales: Dependent, Compulsive, Passive-Aggressive, Self-Defeating, and/or Borderline with pathologically elevated scores on the Insecure Attachment subscale of the BORT. In the second group are the "contact shunning personalities" (p. 4) who retreat from others for fear of being hurt or engulfed. This group appears similar to the group of subjects in this study with combinations of high scores on the following MCMI-II scales: Avoidant, Compulsive, Schizoid, Schizotypal, and on the Alienation subscale of the BORT. In the third group are the "mirror-hungry personalities" (p.

4) who must "show off" in order to receive constant confirmation and admiration. This group appears similar to the group of subjects in this study with high scores on at least one of the following MCMI-II scales: Dependent, Passive-Aggressive, Self-Defeating, or Borderline, and also on the Histrionic scale of the MCMI-II and the Insecure Attachment subscale of the BORT.

Treatment of eating-disordered individuals with these defects in the sense of self (self-pathology) differs from the treatment used with neurotics (Goodsitt, 1977; Johnson & Connors, 1987; Lerner, 1983; Masterson, 1977). Because these patients lack a cohesive sense of self and mistrust others, attempts to treat these patients with the standard techniques successfully used in the treatment of neurotics can result in the patient leaving treatment prematurely and/or her acting out in self-destructive ways (Barth & Wurman, 1986; Masterson, 1981). Given the lack of internal structure and the potential for treatment failure, it would appear important to consider the use of the group or the therapist to "help build important internal structure" (Barth & Wurman, 1986, p. 736) and to help soothe and organize the patient (Goodsitt, 1977; Lerner, 1983, 1986).

Finally, the large percentage of obese subjects with characteristics similar to those found in many of the normal-weight bulimics (extreme scores on the Histrionic scale of the MCMI-II, pathologically elevated scores on the Alienation and Insecure Attachment subscales of the BORT, typical eating-disordered profiles on the EDI) would suggest the advisability of thoroughly evaluating the character structure and food-related behaviors and attitudes of obese

females who present for treatment. The possibility that they might have an atypical eating disorder should be considered. Their potential for developing bulimia or anorexia nervosa should also be assessed.

Summary

Since there does not appear to be a direct, one-to-one relationship between type of eating disorder and personality pathology, it would appear quite important to thoroughly evaluate the character structure of all eating-disordered patients presenting for treatment and to fit the treatment to the character structure rather than to the particular disordered eating behavior which is manifest. Given the pathological Eating Disorders Inventory (EDI) profile found in the obese group, it would appear advisable to screen obese patients for the presence of an eating disorder or the potential for developing one.

Special Features of the Sample

In the majority of studies of eating-disordered individuals, the subjects come from the same facility. Thus, variance due to the effects of non-eating related variables such as geographic area, is thought to be kept to a minimum. However, this also makes these samples less representative.

In the present sample there is both variety and homogeneity. The variety comes from the use of subjects from many different kinds of treatment centers, such as inpatient and outpatient hospital programs, a support group, a community mental health center, university counseling centers, and private practices, including those which specialize in the treatment of eating-disorders. Not only did these

subjects come from different types of centers in different parts of North America, they also were of different ages, and had been ill different periods of time. In addition, there were differences in the age of onset of the eating-disorders, in the length of time an individual had been in treatment, and in levels of independence and education among the subjects. A certain amount of homogeneity occurred, too, because 84 out of the 97 subjects (both the traditionally considered eating-disordered and the obese) came from the same 12 facilities or private practices and a majority came from the midwest.

Two types of subjects were extremely difficult to find and this difficulty suggests certain features about the state of the art in research on eating disorders. Finding restricting anorexics who do not binge or purge is very difficult. Most therapists contacted said they saw very few truly restricting anorexics in a year. At one large center for the treatment of eating disorders, the research assistant said the staff sees about one or two restricting anorexics out of every 100 eating-disordered patients. The low incidence of restricting anorexia may be because most restricting anorexics either die, recover, or become bulimic. It is much harder to survive physically as a restricting anorexic than as a bulimic, and research suggests that once a restricting anorexic has become bulimic for any period of time, it is unlikely that she will be able to maintain an emaciated state again, partly because of physiological reasons (Stordy, Marks, Kalucy, & Crisp, 1977).

Finding obese subjects who were under 40 was also difficult. This

may be, in part, because metabolic and lifestyle changes in midlife make it more likely a woman will become overweight later in life rather than in her 20s and 30s. There was another problem, too. At least 12 of the therapists contacted said they would not risk harming the therapeutic relationships they had with their overweight female patients by suggesting that weight was or should be a therapeutic issue. While there may well be theoretical reasons for this stance, it may also be a function of socialization, akin to being told as children not to stare at the "fat" lady. Again, the question about the status of obesity arises. It is not considered a psychiatric disorder by DSM-III-R and many obese, especially the non-clinical obese, are psychologically healthier than those traditionally regarded as eating-disordered (Prather & Williamson, 1988; Williamson et al, 1985). Many studies suggested that the obese show little psychopathology and/or are healthier than "normals" (Crisp & McGuiness, 1975; Halmi, Long, Stunkard, & Mason, 1980; Stewart & Brook, 1983; Wermuth, Davis Hollister, & Stunkard, 1977). Other researchers suggested that certain obese females do have emotional problems (Gentry, Halverston, & Heisler, 1984; Hamberger, 1951; Maloney & Klykylo, 1983; Mendelson, 1964; Prather & Williamson, 1988; Scott & Baroffio, 1986), but it is difficult to separate out cause from effect. Some individuals overeat because they cannot modulate their emotions in other ways (Richardson, 1946) and some obese individuals become depressed and enter therapy because of criticism of or rejection from others because of their weight (Stewart & Brook, 1983). Furthermore, as Beumont (1985) said, "The behavior of episodic gorging or binge eating is found under a wide

variety of circumstances, not all of them illness related" (p. 174). In the present sample at least 11 out of the 25 obese individuals were in therapy at centers specializing in the treatment of eating-related problems and 16 admitted binge eating. Thus, it is quite likely that this sample was make up of both eating-disordered and non-eating disordered obese individuals if the type of treatment center chosen by the obese subjects and their binge eating are taken into consideration.

Many studies such as that by Johnson and his colleagues (Johnson et al., 1984) used volunteers not in treatment, people answering an advertisement offering information about eating disorders. All of the subjects in this study were involved in at least one kind of psychotherapy and had their diagnoses corroborated by licensed, knowledgeable clinicians.

Although some of the eating-disordered subjects in this study were in the early stages of their illnesses (at least in terms of overt behavioral signs), 35 out of 72 (48.6%) had been eating-disordered for over four years. It appears, then, that at least 48.6% of these subjects were chronically ill and that the nature of their illnesses were such that therapy had not successfully removed their symptoms. Based on this information and on the number of elevated scores on the personality disorder scales of the MCMI-II, it appears that for this sample, enduring, pervasive, character pathology co-existed with the eating-disorders. It is quite possible that what Beumont (1988) said about bulimia is true of all kinds of eating-disorders, that the disorder may be relatively benign in some, but that "with an underlying personality disorder it has a particularly poor prognosis" (p. 175).

Some studies also used patients who were being admitted to an eating-disordered program (Garner et al., 1985); Johnson, Tobin, & Enright, in press). In the present study, almost half had been eating-disordered over four years. The use of subjects who are more chronic makes it possible to identify which types of personality disorders are most commonly found in a group of eating-disordered subjects for whom therapy has not yet been completely successful.

The Eating Disorders Spectrum

One of the major reasons this study was undertaken was to see if there might be a relationship between the type of disordered dietary behaviors found in each subgroup of eating-disordered individuals and the type and level of psychopathology exhibited. Two alternate ways of conceptualizing such a relationship were presented. According to the first viewpoint, each eating-disordered subgroup is characterized by certain types and degrees of psychopathology which differentiate it from other subtypes of eating disorders. This viewpoint has received some support from recent studies which found anorexics to be more obsessive-compulsive and socially withdrawn than bulimics (Garfinkel et al., 1980; Garner et al., 1985a, 1985b; Lepkowsky, 1987; Piran et al., 1988; Tracy et al., 1987) and bulimics to be more impulsive and more strongly driven toward interpersonal need-satisfaction than anorexics (Casper et al., 1980; Garfinkel et al., 1980; Garner et al., 1985a, 1985b; Lepkowsky, 1987; Norman & Herzog, 1983; Piran et al., 1988; Tracy et al., 1987). According to the second viewpoint, the spectrum viewpoint, there is no one-to-one relationship between type of disturbed dietary behavior and degree and type of psychopathology, but

rather, there is "a closely related set of disorders with one or more underlying features" (Andersen, 1983, p. 15). This viewpoint is similar to the eating-disorders schemes included in the theories of Masterson (1977), Swift & Stern (1983), and Johnson & Connors (1987).

The results of the present study lend some support to both viewpoints. It appears there is a spectrum of eating disorders, a band which includes different subgroups, each characterized by a certain set of disordered dietary behaviors and by some kinds and levels of psychopathology which are more prevalent than others, but whose types and levels of psychopathology and object relations development generally vary over a broad range. In the present sample, for example, there was a good deal of overlap among subgroups in types and degrees of psychopathology, but there also appeared to be greater degrees of certain kinds of psychopathology in some subgroups than in others, at least as measured by the Eating Disorders Inventory, the Bell Object Relations Test, and the Millon Clinical Multiaxial Inventory-II.

In accordance with the spectrum concept, there were certain similarities across groups. In each of the four subgroups, at least 40% of the individuals had high scores on the Avoidant and Self-Defeating scales of the MCMI-II, the Social Incompetence, Alienation, and Insecure Attachment subscales of the BORT, and the Body Dissatisfaction and Perfectionism subscales of the EDI. The more traditionally considered eating-disordered groups (the normal-weight bulimic, bulimic anorexic, and restricting anorexic groups) all had scores in the pathological range on the Bulimia, Drive for Thinness, Ineffectiveness, and Interpersonal Distrust subscales of the EDI and

the Egocentricity subscale of the BORT, and elevated scores on the Anxiety, Borderline and Dysthymic scales of the MCMI-II.

Differences were also found. The existence of large standard deviations in some scale and subscale scores (see Tables 8, 9, 10) also shows that there was a good deal of variation within each group in the degree of each kind of psychopathology measured. Furthermore, not every kind of psychopathology found among a large proportion of a group was found in each member of that group. For example, although 70.0% of the restricting anorexics had pathologically elevated scores on the Dysthymia scale, 30.0% did not: in fact, there appeared to be a subgroup with much lower scores.

Although there was a good deal of variation in scores within each group, there were also some types of psychopathology which were more prevalent in each group than there were other types and there were differences among groups in the types and degree of psychopathology exhibited by the largest segments of each group. For example, the restricting anorexics tended to be socially withdrawn and compulsive. They had higher Schizoid scores than the obese and the normal-weight bulimics and had a larger proportion of people with pathologically elevated scores on the Schizotypal scale than did the obese. The restricting anorexics had higher Compulsive scores than the obese and 60.0% of the restricting anorexics had one of their two highest base rate Clinical Personality Pathology scale scores on the Compulsive scale. They also had the largest proportions of subjects showing psychotic features (on the Thought Disorder and Delusional Disorder scales). At the same time, only 10.0% of the restricting anorexics had

one of their highest base rate Clinical Personality Pattern scale scores on either the Histrionic or Antisocial scales and only 20.0% had a high point scale score on the Aggressive-Sadistic scale.

Because of the differences among eating-disordered groups that did emerge, certain questions arise. Why were the restricting anorexics more likely to be schizotypal than histrionic? Why were there higher proportions of restricting anorexics with psychotic features than were found in the other groups? Why was there such a high proportion of restricting anorexics with elevated Compulsive scale scores? Garfinkel and Garner (1982) suggested that emaciated individuals exhibit obsessional features which are partly a manifestation of the state of starvation, but that once weight is restored, hysterical features often surface. There is other evidence that starvation can cause psychological disturbances which may include psychotic features (Casper & Davis, 1977; Garfinkel & Garner, 1982; Maloney & Klykylo, 1983). Perhaps the features which appeared more often among anorexics than among the other eating-disordered groups were only a function of emaciation. It is probably more likely, though, that there are a number of physiological and constitutional differences, as well as personality characteristics, that make it more likely for a person to develop one type of disturbed dietary behavior than another, or to be able to remain anorexic without becoming bulimic (Garfinkel & Garner, 1982; Johnson & Connors, 1987). Perhaps with a larger sample of restricting anorexics, more differences would emerge. It would appear desirable to repeat this type of study using larger samples of eating-disordered subjects, including eating-disordered subjects with other

types of disturbed dietary patterns (bulimarexics, non-purging bulimics, etc.).

Although there appear to be some types of pathology which are more prevalent in a particular group than other types of pathology and although the degree of one kind of psychopathology may be greater in one group than in another, it is important to remember that there is a good deal of variety within groups. It cannot be stressed too strongly that simply subdividing the eating-disordered into groups based on their disturbed dietary behaviors and expecting that members in each subgroup will tend to have the same characteristics is to oversimplify the situation and risk error. For example, it cannot be assumed that all restricting anorexics will mistrust others or that no restricting anorexics will have histrionic personality traits or disorders. It appears there are many different kinds and degrees of psychopathology which can exist within each subtype of eating-disordered individuals. As the results of the series of planned comparisons suggest, assuming that all people who have the same disturbed dietary behaviors are more similar than different or that they differ equally from others, is likely to be incorrect. It appears, as Beumont suggested (1988), that eating disorders are a common pathway for people who are overly concerned about appearance, body weight, and shape and as the results of this study suggest, it appears that there is a wide range of types and degrees of psychopathology among such people.

Concluding Statements and Recommendations for Further Research

There are many factors which make doing research on eating disorders particularly difficult. First, it is difficult to find large

enough numbers of volunteers, especially of restricting anorexics, to take part. Second, it is difficult to determine how to subdivide people into groups and, related to this, how to determine whether or not a person is eating-disordered. When does common overindulgence become a binge, for example? It might be more fruitful to look for underlying subtypes of personality clusters among individuals who find that overconcern about appearance, body weight, and shape are interfering with their ability to lead peaceful, productive, healthy lives no matter what pattern of disturbed dietary behaviors are evident.

It appears, from the results of this study, that there are at least three different kinds of eating-disordered individuals, those who are passive and dependent on others for rewards and self-esteem, those who are more active, but still dependent, and those who are socially withdrawn and constricted. Specific treatment plans might be set up for individuals who fit these patterns and any other patterns which might emerge, regardless of the individual's body weight or type(s) of disordered dietary behavior. Subdividing groups based on dietary behavior and assuming that that behavior is always associated with certain personality traits can result in the failure to note the unique features and character structure of each individual eating-disordered patient who presents for treatment.

Although it is possible that more differences among groups might have emerged with larger groups, it seems likely that heterogeneity rather than homogeneity prevails in terms of personality styles among people who are members of particular eating-disordered groups. Thus,

there is not a clear continuum of severity of psychopathology among subgroups of eating-disordered individuals. Many of the earlier studies which reported such a continuum looked at too narrow a range of subjects: bulimics, binge eaters, and controls (Becker et al., 1987; Katzman & Wolchik, 1984; Nagelberg, Hale, & Ward, 1984) and did not include a range of people who had been classically viewed as eating-disordered. The present study suggests that there are more differences between people who merely overeat than those who use extreme measures to try to be thin than there are differences among those who use extreme measures.

Although previous researchers and therapists have stressed the importance of impaired object relations among the eating-disordered (Bruch, 1962; Friedman, 1985; Goodsitt, 1977; Johnson & Connors, 1987; Lerner, 1983; Masterson, 1977; Selvini-Palazzoli, 1974; Sugarman & Kurash, 1982; Swift and Stern, 1982), the nature of these disturbed object relations has not been sufficiently examined. Future studies of any one sample might include both objective and projective measures of object relations functioning, along with anecdotes illustrating typical behaviors, especially interpersonal interactions. This latter is important in order to try to better understand how particular kinds of disturbed object relations might manifest themselves in the daily lives of eating-disordered individuals.

One factor which seems most important in this particular sample of eating-disordered individuals is the apparent ego-pathology found among them. Since many appeared unable to feel good about themselves without the benefit of external affirmation, and since many appeared to feel

inadequate and unable to live up to unrealistic standards, they may have tried to obtain admiration from others (and probably, also a sense of control) by achieving and maintaining a small body size. Although there are undoubtedly physiological mechanisms which play a part in maintaining anorexic and bulimic symptoms (Buck & Marrazzi, 1987; Garfinkel & Kaplan, 1985; Krieg, Pirke, Lauer, & Backmund, 1988; Levy, Dixon, & Malarkey, 1988; Marrazzi & Luby, 1986; Mitchell, Laine, Morley, & Levine, 1986; Morley & Blundell, 1988), certainly the feelings of inadequacy and the difficulty obtaining need-satisfaction must have been very great in order for these individuals to persist, many of them for over four years, in such health-threatening behaviors. It would seem very important in any type of therapeutic approach with such individuals to work on helping each eating-disordered patient discover what is unique and of value about her, apart from physical attractiveness, to help her learn how to set realistic standards, to help her learn ways of organizing and comforting herself in non-destructive ways, and to help her identify and obtain what she needs. To achieve all of these goals would require a good deal of time and effort. It is no wonder that therapy with such individuals can be so often long term and difficult.

There appears to be limited usefulness in dividing eating-disordered individuals into subgroups based on the type of disordered dietary behavior engaged in. It appears that these diagnostic efforts would be more successful if clinicians and scholars would look beyond the superficial behavior and try to identify the underlying personality clusters which are not necessarily related to or dependent upon the

type of disordered dietary behavior chosen. Given the diversity that has been exhibited within each of these so-called groups and the large overlap between them, focusing on the disordered eating behavior itself may well lead clinicians into the error of stereotyping their clients, whereas awareness of such features as the quality of object relations could mark the beginning of enlightenment.

APPENDIX A

PRIMARY SOURCE OF THERAPY BY GROUP

Table A

Primary Source of Therapy by Group

Type	Group							
	O		NWP		BA		RA	
	n	%	n	%	n	%	n	%
Counseling center (Individual therapy)	6	24.0%	7	25.9%	4	11.4%	0	
Inpatient hospital (Individual therapy)	1	4.0%	3	11.1%	5	14.3%	1	10.0%
Outpatient hospital (Individual therapy)	1	4.0%	6	22.2%	3	8.6%	1	10.0%
Outpatient hospital (Group therapy)	0		1	3.7%	4	11.4%	0	
Mental health center (Individual therapy)	0		1	3.7%	0		0	
Private practice (Individual therapy specialized)[a]	11	44.0%	6	22.2%	18	51.4%	6	60.0%
Private practice (Individual therapy)[b]	6	24.0%	3	11.1%	1	2.9%	2	20.0%

Note. Percentages have been rounded to the nearest 10th.
[a]These private practices are known to specialize in the treatment of eating-disordered patients.
[b]There is no information about whether or not these private practices specialize in the treatment of eating disorders.

APPENDIX B

MEAN WEIGHTS FOR FEMALES

Graduated Mean Weights (lbs) at Each Age and Height for Females

Age	Height (in)														
	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70
15	84	88	92	96	100	104	108	112	115	119	123	127	131	135	139
16	90	93	97	100	104	107	111	114	118	121	125	128	132	135	139
17	94	97	101	104	107	110	113	117	120	123	126	129	133	136	139
18	96	99	102	105	109	112	115	118	121	125	128	131	134	137	141
19	97	100	103	106	110	113	116	119	122	126	129	132	135	138	142
20	98	101	104	107	110	114	117	120	123	126	130	133	136	139	142
21	98	101	104	108	111	114	117	120	124	127	130	133	136	140	143
22	98	102	105	108	111	114	118	121	124	127	130	134	137	140	143
23	98	102	105	108	111	114	118	121	124	127	130	134	137	140	143
24	99	102	106	109	112	115	118	121	124	127	130	133	136	140	143
27	100	103	106	109	112	116	119	122	125	128	131	134	137	140	144
32	103	106	109	112	115	118	121	124	127	130	133	136	139	142	145
37	106	109	112	115	118	121	124	127	130	133	136	139	142	145	148
42	111	114	117	120	123	126	129	132	134	137	140	143	146	149	152
47	115	118	120	123	126	129	132	135	138	141	144	146	149	152	155
52	117	120	123	126	128	131	134	137	140	142	145	148	151	154	156
57	117	120	123	126	129	131	134	137	140	143	145	148	151	154	157
62	116	119	122	124	127	130	133	136	138	141	144	147	150	152	155
67	113	116	119	122	124	127	130	133	136	138	141	144	147	150	152

From Crisp, A.: Anorexia Nervosa: Let Me Be (1980). London: Academic Press, p. 190. Table is reprinted by Crisp from Kemsley (1953/1954).

APPENDIX C

NUMBER OF SUBJECTS FROM EACH STATE/PROVINCE BY GROUP

Table C

Number of Subjects from Each State/Province by Group

	Group			
	O	NWB	BA	RA
	(n = 25)	(n = 27)	(n = 35)	(n = 10)
State/Province				
California	0	1	0	0
Colorado	0	1	1	1
Georgia	0	0	0	1
Illinois	0	1	0	0
Maine	0	1	1	0
Michigan	17	15	26	6
Montana	6	4	1	0
New Hampshire	1	0	1	1
New Jersey	0	1	0	1
New York	1	1	3	0
Ontario	0	2	1	1
Oregon	0	0	1	0
Washington	0	0	1	0

APPENDIX D

FORMS

Sally George Wright
1563 Anita
Grosse Pointe, MI 48236

December 20, 1988

I am a doctoral student in Clinical Psychology at the University of Windsor, Windsor, Ontario, Canada, working on my dissertation. The subject of my research is the levels and types of psychopathology and of object relations among four types of eating-disordered females aged 18 to 35.

There is disagreement in the literature concerning similarities and differences among bulimic and anorexic individuals. In addition, not all treatment outcomes are as positive as hoped for and symptom recurrence is common. These phenomena lead me to ask four questions which I hope my research will help clarify:

1. In what ways do obese subjects differ from those who become anorexic and/or bulimic?

2. Do most eating-disordered individuals with the same symptom complex appear to have similar personality structures?

3. Does it appear that most eating-disordered females with the same symptom complex tend to relate to others similarly?

4. Does it appear to make sense to merely treat the symptoms of an eating-disordered individual or is it also necessary to treat the underlying character disorder?

I am looking for outpatient and inpatient volunteers for my study. I am using four kinds of subjects, females between the ages of 18 and 35, who fall into one of the following categories:

1. Obese with no history of bulimia or anorexia.

2. Restricting anorexics (anorexics who maintain their low weight by restricting their food intake).

3. Normal-weight bulimics (bulimics who may be up to 19% over-weight for their heights and who do not have a history of anorexia).

4. Bulimic anorexics (bulimics who are now anorexic or who have a history of anorexia).

The subjects would be required to fill out four questionnaires/measures, taking about 1½ hours to complete. The measures are:

1. Bell Object Relations and Reality Testing Inventory (Bell, 1987; a 90-item, true/false, forced-choice measure of personal relatedness).

2. Eating Disorder Inventory (Garner & Olmsted, 1984; a 64-item, self-report measure which assesses psychological and behavioral traits common in anorexia nervosa and bulimia).

3. Diagnostic Survey for Eating Disorders-Revised (Johnson, 1984; a self-report questionnaire covering demographic, eating, and weight-related information, drug use, and family medical history).

4. Millon Clinical Multiaxial Inventory-II (Millon, 1987; a 175-item, true/false, self-report measure composed of 25 clinical scales which measure Axis I and II disorders).

Would it be possible for me to obtain subjects from your facility? If so, I will send you the appropriate number of subject packets and the postage for returning the packets to me.

No individual feedback will be given and only group results will be used in analyzing the data. However, subjects may receive a copy of the results if they wish.

The subjects' names will not appear on the measures, only the ID numbers which appear on their permission forms will be printed on their answer sheets. Permission forms should be kept in a separate envelope and locked up until mailed to me. Permission forms should be mailed under separate cover from the responses to the measures.

Please find enclosed examples of the:

1. Subject participation permission form.

2. Subject data sheet (to be filled out by the therapist).

This study has been approved by the ethics committee for human research at Montana State University, Bozeman, MT, where I interned in the Counseling and Psychological Services center. If you would also like me to contact someone from your ethics committee, please send me the required information (name of committee, address, etc.).

Please feel free to call me collect (1-313-881-7612) to discuss the study. Thank you for giving this matter your consideration.

Sincerely,

Sally George Wright
1-313-881-7612 (After 7 PM EST)
1-313-458-9261 (Work)

SUBJECT CONSENT FORM FOR

PARTICIPATION IN HUMAN RESEARCH

MONTANA STATE UNIVERSITY

Personality Characteristics of Female Eating-disordered College Students

You are being asked to participate in a study to identify the various kinds of personality traits of different kinds of eating-disordered students as compared to non-eating-disordered students. The information will be used to better understand those who have problems because they eat too little or too much. It will also help us try to determine which type(s) of therapy should be used for each type of eating problem. The study is of no direct benefit to you (i.e., you will not be paid for participating in the study).

If you choose to participate in this study, you have probably read an advertisement about the project, heard about it in a class, or have been told about it by your nutrition counselor or psychotherapist.

If you decide to take part in this study, I would like you to make an appointment at the Counseling Center on campus, either by stopping by or calling in (994-4531). You need not give your name, just say you would like to participate in the study on eating disorders and set up a time to do so.

When you come in, you will then answer a series of short, written questions. It will probably take you between 45 minutes and an hour to do so. You will only be asked to come in one time. There is no follow-up component to the study. There also should be no risk to your health or well-being resulting from taking part in this study. If you find any of the questions upsetting, however, feel free to skip the question, and/or to make an appointment with me (Sally Wright) to discuss your feelings. You can reach me at: 586-0839.

Permission form: Personality Characteristics of Female Eating-disordered College Students, continued

Although I hope you will want to answer all of the written questions, you may decide not to answer some questions and/or to withdraw at any time during the testing session. All of the information I obtain will be kept confidential. It will not be shown to anyone except in the form of group results. Your questionnaire will only have a number on it, not your name, and your permission form will be kept in a locked file.

If you would like to receive a copy of the results of the study, please tell the secretary at the Counseling Center and leave your name and address on a slip of paper. Write: Results Please, at the top and this paper will be put in an envelope and locked in a file, to maintain confidentiality.

Thank you for agreeing to take part in this study. If you have questions, please feel free to call me.

_____
Principal Investigator

I have read the above explanation and understand the procedure for the study. I _____ agree to participate in the research. I understand that I may later refuse to participate or that I may withdraw from the study at any time. I have received a copy of this consent form for my own records.

Signed _____

Witness _____

Principal Investigator _____

Date _____

SUBJECT'S COPY

SUBJECT CONSENT FORM FOR
PARTICIPATION IN HUMAN RESEARCH

Personality Characteristics of Eating-Disordered Females 207

You are being asked to participate in a study designed to identify the various kinds of personality characteristics and personal relatedness of different kinds of eating-disordered females. The study will be used to try to better understand those who have problems because they eat too little or too much. It is also hoped that this study will help us determine which type(s) of therapy should be used for each type of eating problem. The study is of no direct benefit to you (i.e., you will not be paid for participating in the study). However, should you wish a copy of the results of the study, the results will be sent to you.

Participation in this study involves completing four questionnaires. To most of the questions you will simply respond by filling in circles indicating whether a statement is true about you or false. Other questions will require you to check the correct response. Your therapist will also be asked to indicate what type of eating disorder he/she thinks you have and what kinds of medication you are taking, if any.

There is no follow-up component to the study. There should be no risk to your health or well-being resulting from taking part in this study. Although I hope you will want to answer all of the written questions, you may decide not to answer some question and/or to withdraw at any time during the testing session.

All of the individual information I obtain will be kept confidential. It will not be shown to anyone. Only group results will be reported. Your questionnaires will only have an identification number on them, not your name.

If you would like to receive a copy of the results of this study, please indicate on your permission form. You will keep one copy of the permission form. Please copy your identification number which appears at the top of your permission forms onto all of your questionnaires. Then hand in the permission form which indicates that it is the experimenter's copy. That copy will be kept separate from your questionnaires, locked up until after the study is completed, and then destroyed.

Thank you for agreeing to take part in this study.

Darcy George Wright, M.A.
Principal Investigator

I have read the above explanation and understand the procedure for the study.

I _____ agree to participate in this research. I understand that I may later refuse to participate or that I may withdraw from the study at any time. I agree to allow one of my therapists to indicate what kind of eating disorder I have and what kind(s) of medication I am taking. I have received a copy of this consent form for my own records.

Signed _____

Witness _____

Date _____

___ Please send a copy of the results to: _____

___ I do not wish a copy of the results.

EATING DISORDER STUDY
SUBJECT DATA

Subject's ID #: _____(Appears on permission form.)

Subject's Age: _____(Must be between 18 and 35 years of age.)

Institution: _____

Inpatient _____ Outpatient_____ (Check only one.)

SUBJECT'S DIAGNOSIS: (Check only one.)

_____1. Obese. (At least 20% overweight for age and height.) The subject may binge, but should not fit the criteria for bulimia. That is, she does not try to lose weight or maintain weight by habitual vomiting, or abuse of laxatives, diuretics, or diet pills.

_____2. Normal-weight bulimic. A bulimic without a history of anorexia nervosa. She may be up to 19% "overweight".

She must fit ALL OF THE FOLLOWING CRITERIA:

A. Recurrent episodes of binge eating (rapid consumption of a large amount of food in a discrete period of time).
B. A feeling of lack of control over eating behavior during the eating binges
C. The person regularly engages in either self-induced vomiting, use of laxatives or diuretics, strict dieting or fasting, or vigorous exercise in order to prevent weight gain.
D. A minimum average of two binge eating episodes a week for at least three months.
E. Persistent overconcern with body shape and weight.

_____3. Bulimic anorexic. A bulimic with episodes of and/or history of anorexia nervosa. (Refer to criteria in #2 for bulimia and criteria in #4 for anorexia nervosa.)

_____4. Restricting anorexic. Anorexic without a history of bulimia. Low body weight is maintained solely by restricting food intake.

She must fit ALL OF THE FOLLOWING CRITERIA:

A. Refusal to maintain body weight over a minimal normal weight for age and height, e.g., weight loss leading to maintenance of body weight 15% below that expected; or failure to make expected weight gain during period of growth, leading to body weight 15% below that expected.
B. Intense fear of gaining weight or becoming fat, even though underweight.
C. Disturbance in the way in which one's body weight, size, or shape is experienced, e.g., the person claims to "feel fat" even when emaciated, believes that one area of the body is "too fat" even when obviously underweight.
D. In females, absence of at least three consecutive menstrual cycles when otherwise expected to occur (primary or secondary amenorrhea). (A woman is considered to have amenorrhea if her periods occur only following hormone, e.g., estrogen, administration.)

MEDICATIONS: List any medications the subject is now taking; be especially sure to note use of any psychotropic medication.

_____

Therapist's Signature: _____

Sally George Wright
2759 Fern Drive
Great Falls, MT 59404

Dear Participant in the Study on Eating Disorders:

Thank you so much for taking part in this study. I realize that it takes a good deal of thought, time, and effort to respond to the questions. I also realize that answering some of the questions might bring up uncomfortable feelings.

If you would like to talk to me, please send me a note to the above address. Include your telephone number and the best time for me to call you. You may prefer just to write; if so, I'll write back to you.

If you wish, you may also write to my dissertation chairman, William Balance, Ph.D. His address is:

William Balance, Ph.D.
Department of Psychology
The University of Windsor
Windsor, Ontario
Canada N9B 3P4.

You as a female with an eating disorder or problem, are not alone. Estimates of the incidence of anorexia nervosa and bulimia, especially among female college students, range from 3% to 20%. The incidence of obesity, depending upon the survey, can even be higher. However, our culture continues to advertise "thinness" as the key to happiness and success. For most females, however, to be extremely thin, to look like the majority of female models in magazines and newspapers, is an unattainable goal. Physiology and heredity work against this goal. In an attempt to achieve this unrealistic state of super thinness, many women try to starve themselves and/or purge. The starvation itself leads to bingeing as the body's way to protect itself from the harmful effects of inadequate nutrition. A viscious cycle of bingeing and purging and/or starvation ensues.

With this cycle comes damage to the body and a great deal of emotional turmoil. Although many types of therapies have been designed for eating-disordered individuals, research suggests that some approaches are not successful or that the results are only short-lived. Therefore, I am doing research to try to better understand the personality characteristics and interpersonal relations of eating-disordered women. I am trying to determine whether or not there are major differences among women who are bulimic, anorexic, or obese. Does it appear that we need to have different treatments according to the type of eating disorder or according to the individual's other characteristics, or both?

Hopefully, your responses to the questionnaires will provide information which will help answer these questions and help others with similar problems. Thank you again for your interest and assistance.

Sincerely,

APPENDIX E

MCMI-II PERSONALITY STYLES

Functional Processes and Structural Attributes of Personality Styles In MCMI-II

Style	Functional processes	Structural attributes
1 - Schizoid	Behaviorally lethargic Interpersonally aloof Cognitively impoverished Interactualization mechanism	Flat mood Complacent self-image Meager internalizations Undifferentiated intrapsychic organization
2 - Avoidant	Behaviorally guarded Interpersonally aversive Cognitively distracted Fantasy mechanism	Anguished mood Alienated self-image Vexatious internalizations Fragile intrapsychic organization
3 - Dependent	Behaviorally incompetent Interpersonally submissive Cognitively naive Introjection mechanism	Pacific mood Inept self-image Immature internalizations Inchoate intrapsychic organization
4 - Histrionic	Behaviorally affected Interpersonally flirtatious Cognitively flighty Dissociation mechanism	Fickle mood Sociable self-image Shallow internalizations Disjointed intrapsychic organization
5 - Narcissistic	Behaviorally arrogant Interpersonally exploitive Cognitively expansive Rationalization mechanism	Insouciant mood Admirable self-image Contrived internalizations Spurious intrapsychic organization
6A - Antisocial	Behaviorally impulsive Interpersonally irresponsible Cognitively deviant Acting-out mechanism	Callous mood Autonomous self-image Rebellious internalizations Unbounded intrapsychic organization

Style	Functional processes	Structural Attributes
6B - Aggressive (Sadistic)	Behaviorally fearless Interpersonally intimidating Cognitively dogmatic Isolation mechanism	Hostile mood Competitive self-image Pernicious internalization Eruptive Intrapsychic organization
7 - Compulsive	Behaviorally disciplined Interpersonally respective Cognitively constructed Reaction formation mechanism	Solemn mood Conscientious self-image Concealed internalizations Compartmentalized intrapsychic organization
8A - Passive-Aggressive	Behaviorally stubborn Interpersonally contrary Cognitively negativistic Displacement mechanism	Irritable mood Discontented self-image Oppositional internalizations Divergent intrapsychic organization
8B - Self-Defeating (Masochistic)	Behaviorally abstinent Interpersonally deferential Cognitively inconsistent Devaluation mechanism	Doleful mood Unserving self-image Debased internalizations Inverted intrapsychic organization
S - Schizotypal	Behaviorally aberrant Interpersonally secretive Cognitively autistic Undoing mechanism	Distraught or Insentient mood Estranged self-image Chaotic internalizations Fragmented intrapsychic organization
C - Borderline	Behaviorally precipitate Interpersonally paradoxical Cognitively capricious Regressive mechanism	Labile mood Uncertain self-image Incompatible internalization Diffused intrapsychic organization
P - Paranoid	Behaviorally defensive Interpersonally provocative Cognitively suspicious Projection mechanism	Irascible mood Inviolable self-image Unalterable internalizations Inelastic intrapsychic organizations

Taken from Millon, 1987, pp. 21-27

APPENDIX F

MCMI-II CLINICAL SCALES

MCMI-II Clinical Scales Arranged by Group

Axis I Scales

Clinical Syndrome Scales

- Anxiety Disorder
- Somatoform Disorder
- Bipolar: Manic Disorder
- Dysthymic Disorder
- Alcohol Dependence
- Drug Dependence

Severe Syndrome Scales

- Thought Disorder
- Major Depression
- Delusional Disorder

Axis II Scales

Clinical Personality Pattern Scales

- Schizoid
- Avoidant
- Dependent
- Histrionic
- Narcissistic
- Antisocial
- Aggressive/Sadistic
- Compulsive
- Passive-Aggressive
- Self-Defeating

Severe Personality Pathology Scales

Schizotypal

Borderline

Paranoid

Reprinted from Millon, 1987.

APPENDIX G

SUBSCALE ITEMS FROM EDI

Individual Items from the Eating Disorder Inventory Listed by Subscale

Drive for Thinness

* 1. I eat sweets and carbohydrates without feeling nervous.

7. I think about dieting.

11. I feel extremely guilty after overeating.

16. I am terrified of gaining weight.

25. I exaggerate or magnify the importance of weight.

32. I am preoccupied with the desire to be thinner.

49. If I gain a pound, I worry that I will keep gaining.

Bulimia

4. I eat when I am upset.

5. I stuff myself with food.

28. I have gone on eating binges where I felt that I could not stop.

38. I think about bingeing (overeating).

46. I eat moderately in front of others and stuff myself when they're gone.

53. I have the thought of trying to vomit in order to lose weight.

61. I eat or drink in secrecy.

Body Dissatisfaction

2. I think that my stomach is too big.

9. I think that my thighs are too large.

*12. I think that my stomach is just the right size.

*19. I feel satisfied with the shape of my body.

*31. I like the shape of my buttocks.

45. I think that my hips are too big.

*55. I think that my thighs are just the right size.

59. I think my buttocks are too large.

*62. I think that my hips are just the right size.

Ineffectiveness

10. I feel ineffective as a person.

18. I feel alone in the world.

*20. I feel generally in control of things in my life.

24. I wish I were someone else.

27. I feel inadequate.

*37. I feel secure about myself.

41. I have a low opinion of myself.

*42. I feel that I can achieve my standards.

*50. I feel that I am a worthwhile person.

56. I feel empty inside (emotionally).

Perfectionism

13. Only outstanding performance is good enough in my family.

29. As a child, I tried very hard to avoid disappointing my parents and teachers.

36. I hate being less than the best at things.

43. My parents have expected excellence of me.

52. I feel that I must do things perfectly or not do them at all.

63. I have extremely high goals.

Interpersonal Distrust

*15. I am open about my feelings.

*17. I trust others.

*23. I can communicate with others easily.

*30. I have close relationships.

34. I have trouble expressing my emotions to others.

54. I need to keep people at a certain distance (feel uncomfortable if someone tries to get too close).

*57. I can talk about personal thoughts or feelings.

Interoceptive Awareness

8. I get frightened when my feelings are too strong.

21. I get confused about what emotion I am feeling.

*26. I can clearly identify what emotion I am feeling.

33. I don't know what's going on inside me.

40. I get confused as to whether or not I am hungry.

44. I worry that my feelings will get out of control.

47. I feel bloated after eating a small meal.

51. When I am upset, I don't know if I am sad, frightened, or angry.

60. I have feelings I can't quite identify.

64. When I am upset, I worry that I will start eating.

Maturity Fears

3. I wish that I could return to the security of childhood.

6. I wish that I could be younger.

14. The happiest time in life is when you are a child.

*22. I would rather be an adult than a child.

35. The demands of adulthood are too great.

*39. I feel happy that I am not a child anymore.

48. I feel that people are happiest when they are children.

*58. The best years of your life are when you become an adult.

---

*Indicates negatively keyed item (Reprinted from Garner and Olmsted, 1984).

APPENDIX H

SUBSCALE ITEMS FROM BORT

Subscale Items From the Bell Object Relations Test (BORT)

Alienation

It is hard for me to get close to anyone. (T)

It is my fate to lead a lonely life. (T)

I put a lot into relationships and I get a lot back. (F)

My sex life is satisfactory. (F)

I am usually sorry that I trusted someone. (T)

I have someone with whom I can share my inner-most feelings and who shares such feelings with me. (F)

Making friends is not a problem for me. (F)

I do not know how to meet or talk with persons of the opposite sex. (T)

Relationships with people of the opposite sex always turn out the same way for me. (T)

I shut myself up and don't see anyone for months at a time. (T)

I have at least one stable and satisfying relationship. (F)

No matter how hard I try to avoid them, the same difficulties crop up in my most important relationships. (T)

I may withdraw and not speak to anyone for weeks at a time. (T)

My people treat me more like a child than an adult. (T)

When I am angry with someone close to me, I am able to talk it through. (F)

Others frequently try to humiliate me. (T)

I usually end up hurting those closest to me. (T)

I generally rely on others to make my decisions for me. (T)

People are never honest with each other. (T)

I feel shy about meeting or talking with members of the opposite sex. (T)

I can deal with disagreements at home without disturbing family relationships. (F)

If I become close with someone and he or she proves untrustworthy, I may hate myself for the way things turned out. (T)

I often worry that I will be left out of things. (T)

I often feel nervous when I am around members of the opposite sex. (T)

I have no influence on anyone around me. (T)

I've been hurt a lot in life. (T)

When a person close to me is not giving me his or her full attention, I often feel hurt and rejected. (T)

I would like to be a hermit forever. (T)

I am a very good judge of other people. (F)

<u>Insecure Attachment</u>

No matter how hard I try to avoid them, the same difficulties crop up in my most important relationships. (T)

I feel that I have to please everyone or else they may reject me. (T)

I often worry that I will be left out of things. (T)

If I become close with someone and he or she proves untrustworthy, I may hate myself for the way things turned out. (T)

When I cannot make someone close to me do what I want, I feel hurt or angry. (T)

I am sensitive to possible rejection by important people in my life. (T)

Relationships with people of the opposite sex always turn out the same way with me. (T)

I usually end up hurting those closest to me. (T)

I've been hurt a lot in life. (T)

I am extremely sensitive to criticism. (T)

I feel that I have to please everyone or else they might reject me. (T)

When a person close to me is not giving me his or her full attention, I often feel hurt and rejected. (T)

I yearn to be completely "at one" with someone else. (T)

I am usually sorry that I trusted someone. (T)

It is my fate to lead a lonely life. (T)

I can deal with disagreements at home without disturbing family relationships. (F)

People are never honest with each other. (T)

I may withdraw and not speak to anyone for weeks at a time. (T)

At times I will do almost anything to get my way. (T)

Exercising power over other people is a secret pleasure of mine. (T)

I put a lot into relationships and I get a lot back. (F)

In relationships, I am not satisfied unless I am with the other person all the time. (T)

Egocentricity

People are never honest with each other. (T)

I am usually sorry that I trusted someone. (T)

It is my fate to lead a lonely life. (T)

I believe that a good mother should always please her children. (T)

Others frequently try to humiliate me. (T)

I shut myself up and don't see anyone for months at a time. (T)

No matter how hard I try to avoid them, the same difficulties crop up in my most important relationships. (T)

I have no influence on anyone around me. (T)

I've been hurt a lot in life. (T)

It is hard for me to get close to anyone. (T)

People do not exist when I do not see them. (T)

It seems like I frequently offend someone without intending to. (T)

In relationships, I am not satisfied unless I am with the other person all the time. (T)

Relationships with people of the opposite sex always turn out the same way with me. (T)

Manipulating others is the best way to get what I want. (T)

I feel that I have to please everyone or else they may reject me. (T)

My people treat me more like a child than an adult. (T)

No matter how bad a relationship may get, I will hold onto it. (T)

When I cannot make someone close to me do what I want, I feel hurt or angry. (T)

If I become close with someone and he or she proves untrustworthy, I may hate myself for the way things worked out. (T)

I have someone with whom I can share my inner-most feelings and who shares such feelings with me. (F)

I generally rely on others to make my decisions for me. (T)

If someone dislikes me, I will always try harder to be nice to that person. (T)

The most important thing to me in a relationship is to exercise power over the other person. (T)

Social Incompetence

I feel shy about meeting or talking with members of the opposite sex. (T)

I often feel nervous when I am around members of the opposite sex. (T)

I do not know how to meet or talk with persons of the opposite sex. (T)

I often worry that I will be left out of things. (T)

Making friends is not a problem for me. (F)

It is hard for me to get close to anyone. (T)

I feel that I have to please everyone or else they may reject me. (T)

I generally rely on others to make my decisions for me. (T)

I am sensitive to possible rejection by important people in my life. (T)

No matter how hard I try to avoid them, the same difficulties crop up in my most important relationships. (T)

I have someone with whom I can share my inner-most feelings and who shares such feelings with me. (F)

Reprinted from Bell Object Relations Test factor analysis (Bell, 1986).

APPENDIX I

SUBJECT ADVERTISEMENTS

Support Group Newsletter Advertisement (ANRED ALERT)[a]

VOLUNTEERS NEEDED FOR RESEARCH

I am studying the differences and similarities between anorexia nervosa, bulimia nervosa, and obesity. I need:

* Women
* Between 18 and 35
* Anorexic, or
* Bulimic, or
* Obese
* Willing to fill out four questionnaires.
* Willing to have your therapist substantiate your eating disorder.

All information will be confidential.

Results will be used to try to improve the success of eating disorders therapies.

If you want to help, write:

Sally George Wright
2759 Fern Dr.
Great Falls, MT 59404

---

[a]Anorexia Nervosa and Related Eating Disorders, Inc.

Support Group Advertisement (AABA)[a]

RESEARCH

VOLUNTEERS NEEDED:

Female Bulimics and Anorexics between the ages of 18 and 35 are needed to take part in a study exploring the similarities and differences thought to effect therapy outcome.

If interested, please contact:

Sally George Wright

2759 Fern Drive

Great Falls, MT 59404

or call: (406) 453-8937

Leave message with first name and phone number.

---

[a]American Anorexia/Bulimia Association, Inc.

City Newspaper Advertisement (Great Falls Tribune, Great Falls, MT)

Volunteers Needed. Eating-disordered females, aged 18-35 years, to participate in doctoral research. Requirements: 1 1/2 hours of time, that your eating too much or too little is interfering with your well-being, that you are in psychotherapy.
Confidentiality is maintained. Help up learn more about bulimia, anorexia, and obesity.
Call Sally Wright, 453-8937.

Student Newspaper Advertisement (Oakland University Rochester, MI)

Volunteers Needed. Eating-disordered females, aged 18-35 years, to participate in doctoral research. Requirements: 1 1/2 hours of time, that your eating too much or too little is interfering with your well-being, that you are in psychotherapy.
Confidentiality is maintained. Help us learn more about bulimia, anorexia, and obesity.
Call Sally Wright, 881-7612, after 7 PM.

Student Newspaper Advertisement (Montana State University)[a]

Volunteers Needed. Eating-disordered females, aged 18-35 years, to participate in doctoral research. Requirements: 1 1/2 hours of time, that your eating too much or too little is interfering with your well-being, that you are in psychotherapy. Confidentiality is maintained. Help us learn more about bulimia, anorexia, and obesity.
Call Sally Wright, 586-0839, or leave message at MSU Counseling and Psychological Services, 994-4531.

---

[a]This same advertisement appeared in the Bozeman Daily Chronicle.

APPENDIX J

REQUESTS FOR VOLUNTEERS

Table J

Contacts Made and Response to Requests for Volunteers

	Response		
	Yes	No*	Total
Type of Facility			
Counseling center-			
USA	5	177	182
Hospital (inpatient)			
USA	3	41	44
Hospital (outpatient)			
USA	2	0	2
Hospital (outpatient)			
Canada	1	5	6
Support groups			
USA	1	7	8
Support group			
Canada	0	4	0
Private practice			
USA	22	25	47
Private practice			
Canada	0	3	3
CMHC*/Public Health			
USA	1	7	8

*Community Mental Health Center

APPENDIX K

REFERRAL SOURCES OF SUBJECTS

Table K

Referral Sources of Subjects Retained for Study

	Group							
	O		NWB		BA		RA	
	n	%	n	%	n	%	n	%
Referral Source								
Newspaper/Newsletter advertisement	2	8.0%	5	18.5%	3	8.5%	2	20.0%
Therapist	23	92.0%	21	78.0%	26	74.2%	8	80.0%
Support group	0		1	40.0%	6	17.1%	0	

TABLE L

EXCLUDED QUESTIONNAIRE PACKETS

Table L

Excluded Questionnaire Packets by Reason and Group

	Group			
	O	NWB	BA	RA
Reason not Used				
Failed to return	5	6	4	1
Returned late	3	0	0	0
Invalid/incomplete	0	2	1	1
Inappropriate weight	1	1	1	1
Different previous diagnosis	1	0	0	0
Over 43	3	0	0	0
In recovery	0	2	5	1
Atypical eating disorder	0	1	0	0
Male	0	0	1	1

APPENDIX M

RETURNED, UNUSED QUESTIONNAIRES

Table M

Number and Source of Returned Unused Questionnaire Packets

Centers	Number
Private practices (MI, PA, NJ)*	48
Hospitals (MI, ON)	6
Counseling centers (HA, IL, IN, OH, MT, NE, NY, VA)	60

Note. *State or province from which packet was returned.

APPENDIX N

ANALYSIS OF COVARIANCE

Table N-1

Summary of Analysis of Covariance on Group for the Bell Object Relations Test (Alienation) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	.28	1	.28	.39
Group	3.52	3	1.17	1.64
Residual	65.87	92	.72	
Total	70.99	96	.74	

Note. Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-2

Summary of Analysis of Covariance on Group for the Bell Object Relations Test (Insecure Attachment) with Age as Covariate

Source	SS	df	MS	F
Age	1.79	1	1.79	2.37
Group	3.59	3	1.20	1.58
Residual	69.54	92	.76	
Total	76.81	96	.80	

Note. Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-3

Summary of Analysis of Covariance on Group for the Bell Object Relations Test (Egocentricity) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	.14	1	.14	.23
Group	4.21	3	1.40	2.32
Residual	55.57	92	.60	
Total	60.79	96	.63	

Note. Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-4

Summary of Analysis of Covariance on Group for the Bell Object Relations Test (Social Incompetence) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	.46	1	.46	.49
Group	1.26	3	.42	.45
Residual	85.65	92	.93	
Total	87.23	96	.91	

Note. Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-5

Summary of Analysis of Covariance on Group for the Eating Disorders Inventory (Drive for Thinness) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	14.85	1	14.85	.57
Group	1022.55	3	340.85	13.07***
Residual	2399.49	92	26.08	
Total	3677.36	96	38.31	

Note. Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-6

Summary of Analysis of Covariance on Group for The Eating Disorders Inventory (Bulimia) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	3.20	1	3.20	.10
Group	767.43	3	255.81	7.56***
Residual	3112.73	92	33.83	
Total	3930.99	96	40.95	

Note. Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-7

Summary of Analysis of Covariance on Group for the Eating Disorders Inventory (Body Dissatisfaction) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	144.06	1	144.06	2.25
Group	219.72	3	73.24	1.14
Residual	5898.34	92	64.11	
Total	6216.72	96	64.76	

Note. Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-8

Summary of Analysis of Covariance on Group for the Eating Disorders Inventory (Ineffectiveness) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	.14	1	.14	.003
Group	687.35	3	229.11	3.99**
Residual	5287.14	92	57.47	
Total	6048.23	96	63.00	

Note. Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-9

Summary of Analysis of Covariance on Group for the Eating Disorders Inventory (Perfectionism) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	43.26	1	43.26	1.89
Group	85.13	3	28.38	1.24
Residual	2107.56	92	22.91	
Total	2205.49	96	22.97	

Note. Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-10

Summary of Analysis of Covariance on Group for the Eating Disorders Inventory (Interpersonal District) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	12.82	1	12.82	.56
Group	223.51	3	74.51	3.23*
Residual	2123.00	92	23.08	
Total	2427.63	96	25.29	

Note. Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-11

Summary of Analysis of Covariance on Group for the Eating Disorders Inventory (Interoceptive Awareness) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	127.46	1	127.46	3.60
Group	961.52	3	320.50	9.06***
Residual	3253.83	92	35.37	
Total	4710.25	96	49.06	

Note. Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-12

Summary of Analysis of Covariance on Group for the Eating Disorders Inventory (Maturity Fears) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	15.09	1	15.09	.64
Group	169.36	3	56.45	2.41
Residual	2156.64	92	23.44	
Total	2390.64	96	24.90	

Note. Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-13

Summary of Analysis of Covariance on Group for the Millon Clinical Multiaxial Inventory-II (Schizoid) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	167.91	1	167.91	2.16
Group	1007.85	3	335.96	4.33**
Residual	7132.43	92	77.52	
Total	8308.24	96	86.54	

Note. Raw scores were used for computations.

Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-14

Summary of Analysis of Covariance on Group for the Millon Clinical Multiaxial Inventory-II (Avoidant) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	1229.93	1	1229.93	6.18*
Group	1404.21	3	468.07	2.35
Residual	18282.30	92	198.72	
Total	20916.45	96	217.88	

Note. Raw scores were used for computations.

Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-15

Summary of Analysis of Covariance on Group for the Millon Clinical Multiaxial Inventory-II (Dependent) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	7.84	1	7.84	.13
Group	573.12	3	191.04	3.19*
Residual	5494.53	92	59.72	
Total	6075.50	96	63.28	

Note. Raw scores were used for computations.

Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-16

Summary of Analysis of Covariance on Group for the Millon Clinical Multiaxial Inventory-II (Histrionic) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	126.23	1	126.23	1.13
Group	1720.01	3	573.33	5.15**
Residual	10229.66	92	111.19	
Total	12075.91	96	125.79	

Note. Raw scores were used for computations.

Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-17

Summary of Analysis of Covariance on Group for the Millon Clinical Multiaxial Inventory-II (Narcissistic) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	267.82	1	267.82	2.08
Group	598.24	3	199.41	1.55
Residual	11801.43	92	128.27	
Total	12667.50	96	131.95	

Note. Raw scores were used for computations.

Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-18

Summary of Analysis of Covariance on Group for the Millon Clinical Multiaxial Inventory-II (Antisocial) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	635.24	1	635.24	6.89**
Group	987.95	3	329.31	3.57*
Residual	8477.54	92	92.14	
Total	10100.74	96	105.21	

Note. Raw scores were used for computations.

Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-19

Summary of Analysis of Covariance on Group for the Millon Clinical Multiaxial Inventory-II (Aggressive/Sadistic) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	1386.87	1	1386.87	10.02**
Group	757.77	3	252.59	1.82
Residual	12729.98	92	138.36	
Total	14874.63	96	154.94	

Note. Raw scores were used for computations.

Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-20

Summary of Analysis of Covariance on Group for the Millon Clinical Multiaxial Inventory-II (Compulsive) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	.02	1	.02	.00
Group	1071.60	3	357.20	6.02***
Residual	5452.29	92	59.26	
Total	6523.91	96	67.95	

Note. Raw scores were used for computations.

Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N 21

Summary of Analysis of Covariance on Group for the Millon Clinical Multiaxial Inventory-II (Passive-Aggressive) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	1779.97	1	1779.97	8.85**
Group	639.02	3	213.00	1.05
Residual	18504.51	92	201.13	
Total	20923.50	96	217.95	

Note. Raw scores were used for computations.

Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-22

Summary of Analysis of Covariance on Group for the Millon Clinical Multiaxial Inventory-II (Self-Defeating) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	657.02	1	657.02	3.71
Group	1062.54	3	354.18	2.00
Residual	16264.49	92	176.78	
Total	17984.06	96	187.33	

Note. Raw scores were used for computations.

Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-23

Summary of Analysis of Covariance on Group for the Millon Clinical Multiaxial Inventory-II (Schizotypal) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	1087.27	1	1087.27	6.29*
Group	1266.90	3	422.30	2.44
Residual	15887.66	92	172.69	
Total	18241.83	96	190.01	

Note. Raw scores were used for computations.

Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-24

Summary of Analysis of Covariance on Group for the Millon Clinical Multiaxial Inventory-II (Borderline) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	3905.42	1	3905.42	13.19***
Group	1796.78	3	598.92	2.02
Residual	27221.74	92	295.88	
Total	32923.95	96	342.95	

Note. Raw scores were used for computations.

Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-25

Summary of Analysis of Covariance on Group for the Millon Clinical Multiaxial Inventory-II (Paranoid) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	674.45	1	674.45	5.22*
Group	119.01	3	39.67	.30
Residual	11880.49	92	129.13	
Total	12673.95	96	132.02	

Note. Raw scores were used for computations.

Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-26

Summary of Analysis of Covariance on Group for the Millon Clinical Multiaxial Inventory-II (Anxiety Disorder) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	1033.75	1	1033.75	10.64**
Group	950.98	3	316.99	3.26*
Residual	8937.49	92	97.14	
Total	10922.22	96	113.77	

Note. Raw scores were used for computations.

Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-27

Summary of Analysis of Covariance on Group for the Millon Clinical Multiaxial Inventory-II (Somatoform) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	1228.05	1	1228.05	14.67***
Group	327.05	3	109.17	1.30
Residual	7697.80	92	83.67	
Total	9252.90	96	96.38	

Note. Raw scores were used for computations.

Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. ***p = .001.

Table N-28

Summary of Analysis of Covariance on Group for the Millon Clinical Multiaxial Inventory-II (Bipolar: Manic Disorder) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	650.93	1	650.93	6.70*
Group	748.64	3	249.54	2.57
Residual	8933.86	92	97.10	
Total	10333.44	96	107.64	

Note. Raw scores were used for computations.

Bonferron's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-29

Summary of Analysis of Covariance on Group for the Millon Clinical Multiaxial Inventory-II (Dysthymic Disorder) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	2611.88	1	2611.88	11.18***
Group	2124.33	3	708.11	3.03*
Residual	21486.11	92	233.54	
Total	26222.33	96	273.14	

Note. Raw scores were used for computations.

Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-30

Summary of Analysis of Covariance on Group for the Millon Clinical Multiaxial Inventory-II (Alcohol Dependence) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	623.74	1	623.74	8.61**
Group	893.97	3	297.99	4.11**
Residual	6662.80	92	72.42	
Total	8180.51	96	85.21	

Note. Raw scores were used for computations.

Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-31

Summary of Analysis of Covariance on Group for the Millon Clinical Multiaxial Inventory-II (Drug Dependence) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	1186.47	1	1186.47	10.87***
Group	903.62	3	301.20	2.76*
Residual	10033.65	92	109.06	
Total	12123.75	96	126.28	

Note. Raw scores were used for computations.

Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-32

Summary of Analysis of Covariance on Group for the Millon Clinical Multiaxial Inventory-II (Thought Disorder) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	648.18	1	648.18	8.07**
Group	530.38	3	176.79	2.20
Residual	7381.80	92	80.23	
Total	8560.37	96	89.17	

Note. Raw scores were used for computations.

Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-33

Summary of Analysis of Covariance on Group for the Millon Clinical Multiaxial Inventory-II (Major Depression) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	2235.02	1	2235.02	14.89***
Group	1148.46	3	382.82	2.55
Residual	13809.02	92	150.09	
Total	17192.51	96	179.08	

Note. Raw scores were used for computations.

Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

Table N-34

Summary of Analysis of Covariance on Group for the Millon Clinical Multiaxial Inventory-II (Delusional Disorder) with Age as Covariate

Source of Variation	SS	df	MS	F
Age	138.40	1	138.40	3.24
Group	57.40	3	19.13	.44
Residual	3928.31	92	42.69	
Total	4124.12	96	42.96	

Note. Raw scores were used for computations.

Bonferroni's correction for family-wise error rate indicates an alpha cutoff of .02 (Myers, 1979).

* p = .05. ** p = .01. *** p = .001.

APPENDIX O

PERCENT OF HIGH SCORERS ON PERSONALITY PATTERN SCALES OF MCMI-II

Table O

Percent Scoring Over 74 on the Clinical Personality Pattern Scales of the Multiaxial Inventory-II by Group

	Group			
	O	NWB	BA	RA
Scale				
Schizoid	16.0%	11.1%	25.7%	40.0%
Avoidant	48.0%	63.0%	80.0%	60.0%
Dependent	36.0%	44.4%	62.9%	60.0%
Histrionic	60.0%	63.0%	28.6%	10.0%
Narcissistic	28.0%	33.3%	20.0%	20.0%
Antisocial	12.0%	25.9%	8.6%	10.0%
Agressive/Sadistic	20.0%	33.3%	22.9%	20.0%
Compulsive	8.0%	7.4%	28.0%	60.0%
Passive-Aggressive	60.0%	74.0%	60.0%	30.0%
Self-Defeating	64.0%	77.8%	80.0%	60.0%

APPENDIX P

DESCRIPTIVE STATISTICS FOR

MCMI-II BASE RATE SCALE SCORES

Table P

Descriptive Statistics for Millon Clinical Multiaxial Inventory-II Scales by Group

Scale		Group			
		O	NWB	BA	RA
Schizoid	n	25.0	27.0	35.0	10.0
	M	58.6	57.5	69.6	78.8
	SD	18.8	20.7	24.5	18.8
	Skewness	- 1.9	- 1.6	1.2	.6
	Kurtosis	4.7	3.0	5.8	-.3
Avoidant	n	25.0	27.0	35.0	10.0
	M	70.6	80.5	85.0	85.5
	SD	26.0	19.1	16.9	37.1
	Skewness	- .7	- .5	- .4	- 1.4
	Kurtosis	1.1	.8	.2	1.4
Dependent	n	25.0	27.0	35.0	10.0
	M	75.7	69.6	79.5	73.0
	SD	24.4	23.6	18.6	27.8
	Skewness	- .8	- 1.7	- .9	- .7
	Kurtosis	.2	3.2	1.0	- .3
Histrionic	n	25.0	27.0	35.0	10.0
	M	70.3	73.4	62.5	41.4
	SD	19.7	18.9	25.1	25.7
	Skewness	- 1.3	- 1.1	- .1	- .0
	Kurtosis	.9	.6	- .2	- .3
Narcissistic	n	25.0	27.0	35.0	10.0
	M	60.4	66.2	59.9	45.1
	SD	24.3	19.7	30.0	28.6
	Skewness	- .9	- .9	- .4	- .2
	Kurtosis	.1	4.4	- .5	- 1.1
Antisocial	n	25.0	27.0	35.0	10.0
	M	58.4	67.8	58.2	49.9
	SD	16.2	13.0	18.0	23.3
	Skewness	- 1.9	- .2	- .3	- .8
	Kurtosis	6.5	1.2	4.4	- .9

Table continues

Table P continued

Scale		Group O	NWB	BA	RA
Aggressive Sadistic	n	25.0	27.0	35.0	10.0
	M	59.7	67.9	63.5	46.9
	SD	19.7	24.7	24.1	27.5
	Skewness	- 1.1	- .9	- .5	- .2
	Kurtosis	.6	2.0	1.0	- 1.1
Compulsive	n	25.0	27.0	35.0	10.0
	M	44.6	52.5	60.2	72.4
	SD	24.9	19.0	21.7	18.2
	Skewness	- .3	- .6	- .8	- .8
	Kurtosis	- .8	1.0	.6	.1
Passive-Aggressive	n	25.0	27.0	35.0	10.0
	M	74.4	87.1	82.5	66.9
	SD	30.9	26.0	29.4	38.7
	Skewness	- .5	- .6	- 1.0	- .7
	Kurtosis	- .2	- .1	.4	- .1
Self-Defeating	n	25.0	27.0	35.0	10.0
	M	74.2	84.5	87.0	83.7
	SD	25.6	21.2	17.3	30.7
	Skewness	- 1.0	- 1.0	- .8	- .6
	Kurtosis	1.1	2.2	1.0	- 1.0
Schizotypal	n	25.0	27.0	35.0	10.0
	M	55.0	62.6	67.1	74.8
	SD	12.3	16.5	18.7	24.0
	Skewness	- 2.0	1.4	1.5	.4
	Kurtosis	5.2	2.1	1.5	- 1.3
Borderline	n	25.0	27.0	35.0	10.0
	M	60.6	77.3	76.0	69.0
	SD	15.4	20.4	20.8	26.7
	Skewness	- 1.1	- .2	.2	.2
	Kurtosis	2.7	- .2	- 1.2	- 1.2
Paranoid	n	25.0	27.0	35.0	10.0
	M	60.3	63.3	63.0	60.6
	SD	13.3	13.9	11.9	19.2
	Skewness	- 1.2	- 1.7	- .5	.0
	Kurtosis	1.5	7.8	1.8	2.6

Table continues

Scale		Group O	NWB	BA	RA
Anxiety Disorder	n	25.0	27.0	35.0	10.0
	M	46.2	64.4	69.8	67.4
	SD	26.4	25.2	22.8	19.3
	Skewness	.2	- .7	- .8	- 1.9
	Kurtosis	- .7	.1	.1	3.9
Somatoform Disorder	n	25.0	27.0	35.0	10.0
	M	57.6	59.0	62.1	56.9
	SD	13.8	9.3	10.8	9.6
	Skewness	.6	.1	.6	.6
	Kurtosis	1.3	.0	1.6	.3
Bipolar: Manic Disorder	n	25.0	27.0	35.0	10.0
	M	53.6	57.6	52.0	39.1
	SD	17.8	17.5	21.4	18.7
	Skewness	- 1.1	- .1	.5	- .3
	Kurtosis	.8	3.7	.9	- 1.6
Dysthymic Disorder	n	25.0	27.0	35.0	10.0
	M	53.2	68.5	76.7	68.9
	SD	28.3	21.8	24.2	29.4
	Skewness	- .0	- .9	- 1.0	- .8
	Kurtosis	- 1.2	.0	.5	- .7
Alcohol Disorder 10.0	n	25.0	27.0	35.0	
	M	42.5	57.9	50.9	40.8
	SD	18.7	17.6	17.1	24.8
	Skewness	- 1.0	1.0	- .9	- .8
	Kurtosis	.7	4.1	2.9	- .7
Drug Dependence 10.0	n	25.0	27.0	35.0	
	M	51.9	61.0	55.1	43.3
	SD	13.9	11.2	16.0	22.7
	Skewness	- .7	- 1.0	- .6	- .8
	Kurtosis	- .0	2.4	1.3	- .2
Thought Disorder 10.0	n	25.0	27.0	35.0	
	M	52.4	56.8	61.0	65.4
	SD	17.3	14.7	15.8	17.0
	Skewness	- 2.1	- 2.4	- 1.5	.3
	Kurtosis	4.5	8.0	6.2	- .4

Table continues

Table P continued

Scale		Group O	NWB	BA	RA
Major Depression	n	25.0	27.0	35.0	10.0
	M	51.4	62.1	70.9	61.5
	SD	19.7	15.0	20.9	25.0
	Skewness	- 2.0	- 2.6	- .1	- 1.5
	Kurtosis	3.3	10.9	1.2	3.7
Delusional Disorder	n	25.0	27.0	35.0	10.0
	M	51.0	53.3	54.7	55.8
	SD	21.1	15.5	15.0	21.3
	Skewness	- 1.8	- 1.4	- 1.3	- 2.1
	Kurtosis	2.0	4.2	4.0	6.6

Note. Base rate scores on each scale were used to compute statistics.

APPENDIX Q

PATHOLOGICAL ELEVATIONS ON BORT ALIENATION AND INSECURE ATTACHMENT

Table Q

Percent with Pathological Elevations on Both Alienation and Insecure Attachment Subscales of the Bell Object Relations Test by Group

Group				X^2	p
O	NWB	BA	RA		
40.0%	33.3%	51.4%	40.0%	2.16	.53

PAGINATION ERROR.

TEXT COMPLETE.

ERREUR DE PAGINATION.

LE TEXTE EST COMPLET.

NATIONAL LIBRARY OF CANADA.

CANADIAN THESES SERVICE.

BIBLIOTHEQUE NATIONALE DU CANADA.

SERVICE DES THESES CANADIENNES.

Qualified researchers are encouraged to write the author at the Department of Psychology, University of Windsor, Windsor, Ontario, Canada, N9B 3P4, to obtain raw data.

REFERENCES

American Psychiatric Association. (1987). Diagnostic and statistical manual of mental disorders (3rd ed.), (rev. ed.). Washington, DC: Author.

Andersen, A. (1983). Anorexia nervosa and bulimia: A spectrum of eating disorders. Journal of Adolescent Health Care, 4, 15-21.

Armstrong, J. G. & Roth, D. M. (1989). Attachment and separation, difficulties in eating disorders: A preliminary investigation. International Journal of Eating Disorders, 8(2), 141-155.

Aronson, J. D. (1986). The level of object relations and severity of symptoms in the normal weight bulimic patient. International Journal of Eating Disorders, 5(4), 669-681.

Askevold, F. (1983). The diagnosis of anorexia nervosa. International Journal of Eating Disorders, 2(4), 39-43.

Baker, H. S., & Baker, M. N. (1987). Heinz Kohut's self psychology: An overview. The American Journal of Psychiatry, 144(1), 1-9.

Barth, D., & Wurman, V. (1986). Group therapy with bulimic women: A self-psychological approach. International Journal of Eating Disorders, 5(4), 733-745.

Becker, B., Bell, M., & Billington, R. (1987). Object relations ego deficits in bulimic college women. Journal of Clinical Psychology, 43(1), 92-95.

Bell, M. (1983). Bell Object Relations and Reality Testing Inventory.

Bell, M. (1987). Brief interpretive guide to the Bell Object Relations and Reality Testing Inventory.

Bell, M., Billington, R., & Becker, B. (1986). A scale for the assessment of object relations. Reliability, validity, and factorial invariance. Journal of Clinical Psychology, 42, 733-741.

Bemis, K. (1978). Current approaches to the etiology and treatment of anorexia nervosa. Psychological Bulletin, 85, 593-617.

Beumont, P. J. V. (1988). Bulimia: Is it an illness entity? International Journal of Eating Disorders, 7(2), 167-176.

Beumont, P. J. V., & Abraham, S. F. (1983). Episodes of ruinous overeating or bulimia: Their occurence in patients with anorexia nervosa and with other types of disordered eating. In Anorexia nervosa: Recent developments in research (149-157). New York: Liss.

Beumont, P. J. V., George, G. C. W., & Smart, D. E. (1976). Dieters and vomiters and purgers in anorexia nervosa. Psychological Medicine, 6, 617-624.

Biderman, J., Baldessarini, R. J., Harmatz, J. S., Rivinus, T. M., Arana, G. W., Herzog, D. B., & Schildkraut, J. J. (1986). Heterogeneity in anorexia nervosa. Biological Psychiatry, 21, 213-216.

Blishen, D. R. (1958). The construction and use of an occupational class scale. Canadian Journal of Economics and Political Science, 24 (519-531).

Blishen, B. R., & Carroll, W. K. (1978). Sex differences in a socioeconomic index for occupations in Canada. The Canadian Review of Sociology and Anthropology, 15(3), 352-371.

Blishen, B. R., McRoberts, H. A. (1976). A revised socioeconomic index for occupations in Canada. The Canadian Review of Sociology and Anthropology, 13(1), 71-79.

Boskind-Lodahl, M. (1976). Cinderella's stepsisters: A feminist perspective on anorexia nervosa and bulimia. Journal of Women in Culture and Society, 2(21), 342-356.

Boskind-Lodahl, M., & White, W. C. (1978). The definition and treatment of bulimarexia in college women: A pilot study. Journal of the American College Health Association, 27, 84-97.

Boskind-White, M., White, W. C. (1983). Bulimarexia: The binge purge cycle. New York: Norton.

Bram, S., Eger, D., & Halmi, K. (1982). Anorexia nervosa and personality type: A preliminary report. International Journal of Eating Disorders, 2, 67-73.

Brisman, J., & Siegel, M. (1984). Bulimia and alcoholism: Two sides of the same coin? Journal of Substance Abuse Treatment, 1, 113-118.

Bruch, H. (1962). Perceptual and conceptual disturbances in anorexia nervosa. Psychosomatic Medicine, 24(2), 187-194.

Bruch, H. (1973). Eating disorders: Obesity, anorexia nervosa, and the person within. New York: Basic Books.

Bruch, H. (1978). The golden cage: The enigma of anorexia nervosa. Cambridge: Harvard Univeristy.

Buck, M., & Marrazzi, M. A. (1987). A typical responses to morphine in mice: A possible relationship to anorexia nervosa? Life Sciences, 41, 765-773.

Carroll, K., & Leon, G. (1981). The bulimic-vomiting disorder within a generalized substance abuse pattern. Paper presented at the annual meeting of the Association for the Advancement of Behavior Therapy, Toronto, Canada.

Casper, R. C. (1983). On the emergence of bulimia nervosa as a syndrome: A historical view. International Journal of Eating Disorders, 2, 3-16.

Casper, R. C., & Davis, J. M. (1977). On the course of anorexia nervosa. American Journal of Psychiatry, 134, 974-978.

Casper, R. C., Eckert, E. D., Halmi, K. A., Goldberg, S. C., & Davis, J. M. (1980). Bulimia: Its incidence and clinical importance in patients with anorexia nervosa. Archives of General Psychiatry, 37, 1030-1035.

Cattanach, L., Phil, M., Malley, R., Rodin, J. (1988). Psychologic and physiologic reactivity to stressors in eating disordered individuals. Psychosomatic Medicine, 50, 591-599.

Cohler, B. (1977). The significance of the therapist's feelings in the treatment of anorexia nervosa. In S. C. Reinstein & P. L. Giovacchini (Eds.), Adolescent Psychiatry: Vol. 5 (pp. 304-312). New York: Aronson.

Conference on the Millon Clinical Inventories. (1987). Minnesota: National Computer Systems, Inc.

Conte, H. R., Plutchick, R., Karsu, T. B., & Jarrett, I. (1980). A self-report borderline scale: Discriminative validity and preliminary norms. Journal of Nervous and Mental Disease, 168 (7), 428-435.

Cooper, P. J., & Fairburn, C. G. (1986). The depressive symptoms of bulimia nervosa. British Journal of Psychiatry, 148, 268-274.

Cooper, J. L., Morrison, T. L., Bigman, O. L., Abronowitz, S. I., Blunden, D., Nassi, A., Krener, P. (1988). Bulimia and borderline personality disorder. International Journal of Eating Disorders, 7(1), 43-49.

Crisp, A. H. (1965). Clinical and therapeutic aspects of anorexia nervosa: A study of 30 cases. Journal of Psychomatic Research, 9, 67-78.

Crisp, A. H. (1978). Anorexia Nervosa Medicine, 537-542.

Crisp, A. H. (1980). Anorexia nervosa: Let me be. London: Academic Press.

Crisp, A. H. (1981). Anorexia nervosa at normal body weight: The abnormal-normal weight control syndrome. International Journal of Psychiatry in Medicine, 11(3), 203-233.

Crisp, A. H., Kalucy, R. E., Lacey, J. H., & Harding, B. (1977). The long-term prognosis in anorexia nervosa: Some factors predictive of outcome. In R. A. Vigersky (Ed.), Anorexia nervosa (pp. 55-65). New York: Raven Press.

Crisp, A. H. & McGuiness, B. (1975). Jolly fat: Relation between obesity and psychoneurosis in general population. British Medical Journal, 1, 7-9.

Crisp, A. H., Palmer, R. L., & Kalucy, R. S. (1976). How common is anorexia nervosa? A prevalence study. British Journal of Psychiatry, 128, 549-554.

Crisp, A. H., & Toms, D. A. (1972). Primary anorexia nervosa or weight phobia in the male: Report on 13 cases. British Medical Journal, 1, 334-338.

Cyr, J. J., Bonato, D. B., Garner, D. M., & Olmsted, M. P. (1988). The HSCL-58: Factors derived with a clinical sample of eating disordered outpatients. International Journal of Eating Disorders, 7(6), 819-824.

Dally, P. (1969). Anorexia nervosa. New York: Grune & Stratton.

Deutsch, H. (1942). Some forms of emotional disturbance and their relation to schizophrenia. Psychoanalytic Quarterly, 11, 301-321.

Dickstein, L. J. (1985). Anorexia nervosa and bulimia: A review of clinical issues. Hospital and Community Psychiatry, 36(10), 1086-1092.

Dunn, P., & Ondercin, S. (1981). Compulsive eating among college women. Journal of Clinical Psychology, 37, 43-49.

Dwoois, F. (1949). Compulsive neurosis with cachexia. American Journal of Psychiatry, 106, 107-115.

Endicott, J., Spitzer, R., Fliess, J., & Cohen, J. (1976). The global assessment scale. Archives of General Psychiatry, 33, 766-771.

Engelman, E. (1985). Level of object representation in depression: A longitudinal study. Unpublished doctoral dissertation, Adelphi University.

Fairburn, C. G. (1982). Binge-eating and bulimia nervosa. London: Smith, Kline, & French.

Fairburn, G. G. & Cooper, P. J. (1984). Binge-eating, self-induced vomiting and laxative abuse: A community study. Psychological Medical, 14, 401-410.

Feighner, J. P., Robins, E., Guze, S. G., Woodruff, R. A., Winokur, J., & Munoz, R. (1972). Diagnostic criteria for use in psychiatric research. Archives of General Psychiatry, 26, 57-63.

Ferguson, J. M., & Damluji, N. F. (1988). Anorexia nervosa and schizophrenia. International Journal of Eating Disorders, 7(3), 343-352.

Frazier, S. H. (1965). Anorexia nervosa. Diseases of the Nervous System, 155-159.

Friedman, M. S. (1985). Bulimia. Women and Therapy, 4(2), 63-69.

Garfinkel, P. E., & Garner, D. M. (1982). Anorexia nervosa: A multidimensional perspective. New York: Brunner/Mazel.

Garfinkel, P. E., & Garner, D. M. (1984). Bulimia in anorexia nervosa. In R. C. Hawkins, W. J. Fremouw, & P. F. Clement (Eds.), The binge-purge syndrome (pp. 27-46). New York: Springer.

Garfinkel, P. E., & Kaplan, A. S. (1985). Starvation based perpetuating mechanisms in anorexia nervosa and bulimia. International Journal of Eating Disorders, 4(4), 651-665.

Garfinkel, P. E., Moldofsky, H., & Garner, D. M. (1980). The heterogeneity of anorexia nervosa. Archives of General Psychiatry, 37, 1036-1040.

Garner, D. M., & Garfinkel, P. E. (1980). Socio-cultural factors in the development of anorexia nervosa. Psychological Medicine, 10, 647-656.

Garner, D. M., Garfinkel, P. E., & Olmsted, M. P. (1983). An overview of socio-cultural factors in the development of anorexia nervosa. In P. L. Darby, P. E. Garfinkel, D. M. Garner, & D. V. Coscina (Eds.), Anorexia nervosa: Recent development in research (pp. 65-82). New York: Liss.

Garner, D. M., Garfinkel, P. E., & O'Schaughnessy, M. (1985a) Clinical and psychometric comparison between bulimia in anorexia nervosa and bulimia in normal-weight women. Report of the Fourth Ross Conference on Medical Research (pp. 6-13). Columbus, OH: Ross Laboratories.

Garner, D. M., Garfinkel, P. E., & O'Shaughnessy, M. (1985b). The validity of the distinction between bulimia with and without anorexia nervosa. American Journal of Psychiatry, 142(5), 581-587.

Garner, D. M., Olmsted, M. P., & Polivy, J. (1983). The Eating Disorder Inventory: A measure of cognitive-behavioral dimensions of anorexic nervosa and bulimia. In P. L. Darby, P. E. Garfinkel, D. M. Garner, & D. V. Coscina (Eds.), Anorexia nervosa: Recent developments in research (pp. 173-184). New York: Liss.

Garner, D. M., Olmsted, M. P., Polivy, J. (1984). Eating Disorder Inventory Manual. USA: Psychological Assessment Resources.

Garner, D. M., Olmsted, M. P., Polivy, J., & Garfinkel, P. E. (in press). Comparison between weight preoccccupied women and anorexia nervosa. Psychosomatic Medicine.

Geist, R. A. (1985). Therapeutic dilemmas in the treatment of anorexia nervosa: A self-psychological perspective. In S. W. Emmett (Ed.), Theory and treatment of anorexia nervosa and bulimia: Biomedical, socio-cultural and psychological perspectives (pp. 268-288). New York: Brunner/Mazel.

Gentry, K., Halverston, J. D., Heisler, S. (1984). Psychological assessment of morbidly obese patients undergoing gastric bypass: A comparison of preoperative and postoperative adjustment. Surgery, 95, 215-220.

Gibbons, J. (1984). Prediction of object representations from projective test data: Borderline personality disorder (DSM III). Unpublished doctoral dissertation, Fordham University, New York.

Goodsitt, A. (1977). Narcissistic disturbances in anorexia nervosa. In S. C. Reinstein & P. L. Giovacchini (Eds.), Adolescent Psychiatry: Vol. 5 (pp. 304-312). New York: Aronson.

Goodsitt, A. (1985). Self-psychology and the treatment of anorexia nervosa. In D. M. Garner & P. E. Garfinkel (Eds.), Handbook of psychotherapy for anorexia nervosa and bulimia (pp. 55-82). New York: Guilford Press.

Goodsitt, A. (1983). Self-regulatory disturbances in eating disorders. International Journal of Eating Disorders, 2(3), 51-60.

Gormally, J., Black, S., Daston, S., & Rardin, D. (1982). The assessment of binge eating severity among obese persons. Addictive Behaviors, 7, 47-55.

Grace, P. S., Jacobson, R. S., & Fullager, C. J. (1985). A pilot comparison of purging and non-purging bulimics. Journal of Clinical Pyschology, 41(2), 173-180.

Guiora, A. (1967). Dysorexia: A psychopathological study of anorexia nervosa and bulimia. American Journal of Psychiatry, 124, 391-395.

Gunderson, J. G. (1977). Diagnostic Interview for Borderlines, First Edition.

Gunderson, J. G., Kolb, J., & Austin, V. (1981). The diagnostic interview for borderline patients. American Journal of Psychiatry, 138, 896-903.

Gwirtsman, H. E., Roy-Byrne, P., Vager, J., & Gerner. (1983). Neuroendocrine tests in bulimia. American Journal of Psychiatry, 140, 559-563.

Halmi, K. A. (1983). Anorexia nervosa and bulimia. Psychosomatics, 24, 111-129.

Halmi, K. A., & Falk, J. R. (1982). Anorexia nervosa: A study of outcome discriminators in exclusive dieters and bulimia. Journal of Child Psychiatry, 21, 369-375.

Halmi, K. A., Long, M., Stunkard. A. J., & Mason, E. (1980). Psychiatric diagnosis of morbidly obese gastric bypass patients. American Journal of Psychiatry, 137, 470-472.

Hamberger, W. W. (1951). Emotional aspects of obesity. Medicine Clinics of North America, 35, 483-499.

Harris, R. J. (1985). A primer of multi-variate statistics. New York: Academic Press.

Hathaway, S. R., & McKinley, J. C. (1967). The Minnesota Multiphasic Personality Inventory. New York: Psychological Corporation.

Hatsukami, D. K., Mitchell, J. E., & Ekert, E. D. (1984). Eating disorders: A variant of mood disorders? Psychiatric Clinics of North America, 7(2), 349-365.

Hatsukami, D. K., Owen, P., Pyle, R., & Mitchell, J. (1982). Similarities and differences on the MMPI between women with bulimia and women with alcohol or drug abuse problems. Additve Behaviors, 7, 435-439.

Hawkins, R. C., II, Fremouw, W. J., & Clement, P. F. (Eds.). (1984). The binge-purge syndrome: Diagnosis, treatment, and research. New York: Springer.

Herman, C. P., & Polivy, J. (1980). Restrained eating. In A. J. Stunkard (Ed.), Obesity (pp. 208-255). Philadelphia: W. B. Saunders.

Herzog, D. (1982). Bulimia in the adolescent. American Journal of Diseases in Children, 136, 985-989.

Hsu, L. K. G. (1980). Outcome of anorexia nervosa. Archives of General Psychiatry, 37, 1041-1046.

Hudson, J., Latter, P., & Pope, J. (1982). Bulimia related to affective disorders by family history and response to dexamethasone suppression test. American Journal of Psychiatry, 139, 685-687.

Hudson, J. I., Pope, H. G., Jonas, J. M., & Yurgelun-Todd, D. (1983). Family history study of anorexia nervosa and bulimia. British Journal of Psychiatry, 142, 133-138.

Humphrey, L. L. (1986). Structural analysis of parent-child relationships in eating disorders. Journal of Abnormal Psychology, 94(4), 395-402.

Johnson, C. (1984). The initial consultation. In D. M. Garner & P. Garfinkel (Eds.), Handbook of treatment for anorexia nervosa and bulimia. New York: Guilford.

Johnson, C., & Connors, M. E. (1987). The etiology and treatment of bulimia nervosa: A biopsychosocial perspective. New York: Basic Books.

Johnson, C., & Larson, R. (1982). Bulimia: An analysis of moods and behavior. Psychosomatic Medicine, 44(4), 341-351.

Johnson, C., Lewis, C., Hagman, J. (1984). The syndrome of bulimia: Review and synthesis. Psychiatric Clinics of North America, 1(2), 247-273.

Johnson, C., Stuckey, M., Lewis, L. D., & Schwartz, D. (1982). Bulimia: A descriptive study of 316 cases. In P. L. Darby, P. E. Garfinkel, D. M. Garner, & D. V. Coscina (Eds.), Anorexia nervosa: Recent developments (159-172). New York: Liss.

Johnson, C., Tobin, D., & Enright, A. (In press). Prevalence and clinical characteristics of borderline patients in an eating disordered population. Journal of Clinical Psychiatry.

Johnson, C., Tobin, D., & Steinberg, S. (In press). Etiological, developmental, and treatment considerations for bulimia. Journal of College Student Psychotherapy.

Katzman, M. A., & Wolchik, S. A. (1984). Bulimia and binge eating in college women: A comparison of personality and behavioral characteristics. Journal of Consulting and Clinical Psychology, 52(3), 423-428.

Kaye, W. H., Gwirtsman, D. T., George, S. R., Weiss, S. R., & Jimerson, D. C. (1986). Relationship of mood alterations to bingeing behavior in bulimia. British Journal of Psychiatry, 149, 479-485.

Kennedy, S. H., & Garfinkel, P. E. (1989). Patients admitted to hospital with anorexia nervosa and bulimia nervosa: Psychopathology, weight gain, and attitudes toward treatment. International Journal of Eating Disorders, 8(2), 181-190.

Kernberg, O. (1975). Borderline conditions and pathological narcissism. New York: Aronson.

Kernberg, O. (1980). Internal world and external reality: Object relations theory applied. New York: Aronson.

Klesges, R. C. (1984). Personality and obesity: Global versus specific measures? Behavioral Assessment, 6, 347-356.

Kog, E., & Vandereycken, W. (1985). Family characteristics of anorexia nervosa and bulimia: A review of the research literature. Clinical Psychology Review, 5, 159-180.

Krieg, J., Pirke, K., Lauer, C., & Backmund, H. (1988). Endocrine mrtabolic, and cranial computed tomographic findings in anorexia nervosa. Biological Psychiatry, 23, 377-387.

Lacey, J. H., Coker, S., & Birthchnell, S. A. (1986). Bulimia: Factors associated with its etiology and maintenance. International Journal of Eating Disorders, 5(3), 475-487.

Lepkowsky, C. M. (1987). Personality pathology in eating disorders. In C. Green (Ed.), Proceedings of the First Conference on the Millon Inventories. Minneapolis, MN: National Computer Systems.

Lerner, H. D. (1983). Contemporary psychoanalytic perspectives on gorge-vomiting. International Journal of Eating Disorders, 3(1), 47-63.

Lerner, H. D. (1986). Current developments in the psychoanalytic psychotherapy of anorexia nervosa and bulimia nervosa. The Clinical Psychologist, 39(2), 39-43.

Lesser, L. I., Ashenden, B. J., Delrusky, M., & Eisenberg, L. (1960). Anorexia nervosa in children. American Journal of Orthopsychiatry, 30, 572-580.

Levonkron, S. (1985). Psychotherapy as a compensatory experience with the anorexic patient. International Journal of Eating Disorders, 4(4), 696-699.

Levy, A. B., Dixon, K. N., & Malarkey, W. B. (1988). Pituitary response to TRH in bulimia. Biological Psychiatry, 23, 476-484.

Lindman, H. R. (1974). Analysis of variance in complex experimental design. San Francisco: Freeman and Co.

Lingswiler, V. M., Crowther, J. H., & Stephens, M. A. P. (1987). Emotional reactivity and eating in binge eating and obesity. Journal of Behavioral Medicine, 10(3), 287-299.

Loro, A. D., Jr., & Orleans, C. S. (1981). Binge eating in obesity: Preliminary findings and guidelines for behavioral analysis and treatment. Addictive Behaviors, 6, 155-166.

Lowenkopf, E. L. (1982). Anorexia nervosa: Some nosological considerations. Comprehensive Psychiatry, 23, 233-240.

Mahler, M. (1972). A study of the separation-individuation process: Its possible application to borderline phenomena in the psychoanalytic situation. In The psychoanalytic study of the child: Vol. 26. (pp. 403-425). New York: New York Times Books.

Mahler, M. (1974). Symbiosis and individuation: The psychological birth of the human infant. Psychoanalytic study of the child, 29, 89-105.

Mahler, M., Pine, F., & Bergman, A. (1975). The psychological birth of the human infant. New York: Basic Books.

Maloney, M. J., & Klykylo, W. M. (1983). An overview of anorexia nervosa, bulimia, and obesity in children and adolescents. Journal of the American Academy of Child Psychiatry, 22(2), 99-107.

Marcus, M. D., Wing, R. R., & Hopkins, J. (1988). Obese binge eaters: Affect, cognitions, and response to behavioral weight control. Journal of Consulting and Clinical Psychology, 56(3), 433-439.

Marrazzi, M. A., & Luby, E. D. (1986). An auto-addiction opioid model of chronic anorexia nervosa. International Journal of Eating Disorders, 5(2), 191-208.

Masterson, J. F. (1981). The narcissistic and borderline disorders: An integrated developmental approach. New York: Brunner/Mazel.

Masterson, J. F. (1977). Primary anorexia nervosa in the borderline adolescent: An object-relations view. In P. Hartocollis (Ed.), Borderline personality disorders: The concept, the syndrome, the patient. New York: International Universities Press.

Masterson, J. F. (1976). Psychotherapy of the borderline adult: A developmental approach. New York: Brunner/Mazel.

Matikainen, M. (1979). Spontaneous rupture of the stomach. American Journal of Surgery, 138, 451-452.

Meissner, W. W. (1984). The borderline spectrum: Differential diagnosis and developmental issues. New York: Aronson.

Mendelson, M. (1964). Psychological aspects of obesity. The Medical Clinics of North America: Obseity Issue, 48(5), 1373-1385.

Mickalide, D. M., & Andersen, A. E. (1985). Subgroups of anorexia nervosa and bulimia: Validity and utility. Journal of Psychiatric Research, 19(2/3), 121-128.

Miller, P. H. (1983). Theories of developmental psychology. USA: Freeman.

Millon, T. (1969). Modern psychopathology: A biosocial approach to maladaptive learning and functioning. Philadelphia, PA: Saunders.

Millon, T. (1977). Millon clinical multiaxial inventory. Minneapolis, MN: National Computer Systems.

Millon, T. (1981). Disorders of personality, DSM-111-Axis 11. New York: Wiley.

Millon, T. (1983). Millon clinical multiaxial inventory manual (3rd ed.). Minneapolis, MN: National Computer Systems.

Millon, T. (1987). Millon Clinical Multiaxial Inventory-II. Minneapolis, MN: National Computer Systems.

Minnesota Multiphasic Personality Inventory. (1943). University of Minnesota: The Psychological Corporation.

Miripol, P. (1982). Clinical and statistical validation and current object relations measured. Unpublished doctoral dissertation, Illinois Institute of Technology.

Mitchell, J. E. & Goff, G. (1984). Bulimia in males. Psychosomatics, 25, 909-913.

Mitchell, J. E., Hatsukami, D., Pyle, R. L., & Eckert, E. K. (1986). The bulimia syndrome: Course of the illness and associated problems. Comprehensive Psychiatry, 27(2), 165-170.

Mitchell, J. E., Laine, D. E., Morley, J. E., & Levine, A. S. (1986). Naloxone but not CCK-8 may attenuate binge-eating behavior in patients with the bulimia syndrome. Biological Psychiatry, 21, 1399-1406.

Morley, J. E., & Blundell, J. E. (1988). The neurobiological basis of eating disorders: Some formulations. Biological Psychiatry, 23, 53-78.

Muni-Brander P. & Lachenmeyer, J. (1986). Eating disorders in adolescent males. The Canadian Association for Health, Physical Education and Recreation Journal, 52(4), 27-29.

Myers, J. L. (1979). Fundamentals of experimental design. Boston: Allyn and Bacon.

Nagelberg, D. B., Hale, S. L., & Ware, S. L. (1984). The assessment of bulimic symptoms and personality correlates in female college students. Journal of Clinical Paychology, 40(2), 440-445.

Newman, P., & Halvorson, P. (1983). Anorexia nervosa and bulimia: A handbook for counselors and therapists. New York: Van Nostrand Reinhold.

Norman, D. K., & Herzog, D. B. (1983). Bulimia, anorexia nervosa, and anorexia nervosa with bulimia: A comparative analysis of MMPI profiles. International Journal of Eating Disorders, 2, 43-52.

Palmer, H., & Jones, M. (1939). Anorexia as a manifestation of compulsive neurosis: A study of psychogenic factors. Archives of Neurological Psychiatry, 41, 856-860.

Piran, N., Lerner, P., Garfinkel, P. E., Kennedy, S. H., & Brouillette, C. (1988). Personality disorders in anorexia patients. International Journal of Eating Disorders, 7(5), 589-599.

Pope, H. G., Frankenburg, F. R., Hudson, J. L. et al. (1987). Is bulimia associated with borderline personality disorder: A controlled study. Journal of Clinical Psychiatry, 48, 118-184.

Pope, H. G., & Hudson, J. I. (1989). Are eating disorders associated with borderline personality disorder? A critical review. International Journal of Eating Disorders, 8(1), 1-9.

Pope, H. G., & Hudson, J. I. (1988). Is bulimia nervosa a heterogeneous disorder? Lessons from the history of medicine. International Journal of Eating Disorders, 7(2), 155-166.

Pope, H. G., Jonas, J. M., Hudson, J. I., Cohen, B. M., & Gaunderson, J. G. (1983). The validity of the DSM-III borderline personality disorder: A phenomenologic family-history, treatment-response, and long-term follow-up study. Archives of General Psychiatry, 54, 423-430.

Prather, R. C., & Williamson, D. A. (1988). Psychopathology associated with bulimia, binge eating, and obesity. International Journal of Eating Disorders, 7(2), 177-184.

Pyle, R., Mitchell, J., & Eckert, E. (1981). Bulimia: A report of 34 cases. Journal of Clinical Psychiatry, 42, 60-64.

Radant, S. C. (1987). Bulimia as a subtype of borderline personality disorder: A comparison study (Doctoral dissertation, California School of Professional Psychology, 1985). Dissertation Abstracts International, 46, 2821B.

Randolph, B. (1984). Sexual decision making: A correlational study of levels of decision making with body image, sex role identity, self esteem, and object relations. Unpublished doctoral dissertation, Virginia Consortium of Professional Psychology, Old Dominion University.

Richardson, H. B. (1946). Obesity as a manifestation of neurosis. Medical Clinics of North America, 30, 1187-1198.

Roland, C., Jr. (1970). Anorexia nervosa: A survey of the literature and review of 30 cases. In C. Roland, Jr. (Ed.), Anorexia and obesity. Boston: Little, Brown.

Rollins, N. R., & Piazzo, E. (1978). Diagnosis of anorexia nervosa: A critical reappraisal. Journal of Child Psychiatry, 17, 126-137.

Root, M. P. P., Fallon, P., & Friedrick, W. N. (1985). Bulimia: A systems approach to treatment. New York: Norton.

Rorschach, H. (1921). New York: Grune & Stratton.

Rothenberg, A. (1986). Eating disorder as a modern obsessive-compulsive syndrome. Psychiatry, 49, 45-53.

Russell, G. F. M. (1979). Bulimia nervosa: An ominous variant of anorexia nervosa. Psychological Medicine, 9, 429-448.

Russell, G. F. (1985). The changing nature of anorexia nervosa: An introduction to the conference. Journal of Psychiatric Research, 19(2/3), 101-109.

Schneider, J. A. Agras, W. S. (1987). Bulimia in males: A matched comparison with females. International Journal of Eating Disorders, 6(2), 235-242.

Schwartz, D. M., Thompson, M. G., & Johnson, C. L. (1982). Anorexia nervosa and bulimia: The socio-cultural context. International Journal of Eating Disorders, 1, 20-36.

Scott, D. W. (1986). Anorexia nervosa in the male: A review of clinical epidemiological and biological findings. The International Journal of Eating Disorders, 5(5), 799-820.

Selvini-Palazzoli, M. (1974). Anorexia nervosa. London: Chaucer.

Selvini-Palazzolli, M. S. (1978). Self-starvation. London: Chaucer Press.

Shainess, N. (1979). The swing of the pendulum - from anorexia to obesity. The American Journal of Psychoanalysis, 39(3), 225-234.

Skoog, D. K., Andersen, A. E., & Laufer, W. S. (1987). Personality and treatment effectiveness in anorexia nervosa. Journal of Clinical Psychology, 40(4), 893-961.

Small, A. C., Madero, J., Gross, H., Teagno, L., Lieb, J., & Ebert, M. (1981). A comparative analysis of primary anorexics and schizophrenics on the MMPI. Journal of Clinical Psychology, 37, 773-736.

Small, A., Teagno, L., Madero, J., Gross, H., & Ebert, M. (1982). A comparison anorexics and schizophrenics on psychodiagnostic measures. international Journal of Eating Disorders, 1(3), 49-56.

Smart, D., Beaumont, P., & George, G. (1976). Some personality characteristics of patients with anorexia nervosa. British Journal of Psychiatry, 128, 57-60.

Solyom, L., Thomas, C. D., Freeman, R. J., & Miles, J. E. (1983). Anorexia nervosa: Obsessive-compulsive disorder or phobia? A comparison study. In P. L. Darby, P. E. Garfinkel, D. M. Garner, & D. V. Coscina. (Eds.). Anorexia nervosa: Recent developments in research. (pp 137-147). New York: Alan R. Liss.

Sours, J. (1984). The anorexia nervosa syndrome. International Journal of Psychoanalysis, 52, 567-576.

Sours, J. (1980). Starving to death in a sea of objects. New York: Aronson.

SPSS, Inc. (1989). Statistical Package for the Social Sciences, X,(3) Release.

Squire, S. (1983). The slender balance: Causes for bulimia, anorexia and the weight-loss, weight-gain seesaw. New York: Putnam.

Stevens, G. & Featherman, D. L. (1981). A revised socioeconomic index of occupational status. Social Science Research, 10, 364-395.

Stewart, A. L. & Broock, R. H. (1983). Effects of being overweight. American Journal of Public Health, 73, 171-178.

Stordy, B. J., Marks, V., Kalucy, R. C., & Crisp, A. H. (1977). Weight gain, thermic effects of glucose and resting metabolic rate during recovery from anorexia nervosa. American Journal of Clinical Nutrition, 30, 138-146.

Strauss, J., & Ryan, R. M. (1987). Autonomy disturbances in subtypes of anorexia nervosa. Journal of Abnormal Psychology, 96(3), 254-258.

Strober, M. (1980). Personality and symptomatological features in young nonchronic anorexia nervosa patients. Journal of Psychosomatic Research, 24, 353-359.

Strober, M. (1981). The significance of bulimia in juvenile anorexia nervosa: An exploration of possible etiological factors. International Journal of Eating Disorders, 1, 28-43.

Strober, M., & Goldenberg, I. (1981). Ego boundary disturbance in juvenile anorexia nervosa. Journal of Clinical Psychology, 37, 433-438.

Strober, M., & Katz, J. L. (1987). Do eating disorders and affective disorders share a common etiology?: A dissenting opinion. International Journal of Eating Disorders, 6(2), 171-180.

Strober, M., Salkin, B., Burroughs, J., & Morrell, W. (1982). Validity of the bulimia-restricter distinction in anorexia nervosa: Parental personality characteristics and family psychiatric morbidity. The Journal of Nervous and Mental Disease, 170(6), 345-351.

Stunkard, A. J. (1959). Eating patterns and obesity. Psychiatric Quarterly, 33, 284-292.

Stunkard, A. J. (1977). I almost feel thin. California: Bull Publishing.

Sugarman, A., & Kurash, C. (1982). The body as a transitional object in bulimia. International Journal of Eating Disorders, 1, 57-67.

Sugarman, A., Qwinlan, D., & Devenis, L. (1982). Ego boundary disturbance in anorexia: Preliminary findings. Journal of Personality Assessment, 46, 455-461.

Swift, W. J., Camp, B. W., Bushnell, N. J., & Bargman, G. J. (1984). Ego development in anorexia inpatients. International Journal of Eating Disorders, 3(3), 73-85.

Swift, W. J., & Stern, S. (1982). The psychodynamic diversity of anorexia nervosa. International Journal of Eating Disorders, 2(1), 17-35.

Teusch, R. (1988). Level of ego development and bulimics' conceptualizations of their disorder. International Journal of Eating Disorders, 7(5), 607-615.

Thompson, D. A., Berg, K. M., & Shafford, L. A. (1987). The heterogeneity of bulimic symptomatology: Cognitive and behavioral dimensions. International Journal of Eating Disorders, 6(2), 215-234.

Thompson, J. K. (1988). Similarities among bulimia nervosa patients categorized by current and historical weight: Implications for the classification of eating disorders. International Journal of Eating Disorders, 7(2), 185-189.

Toner, B. B., Garfinkel, P. E., & Garner, D. M. (1986). Long-term follow-up of anorexia nervosa. Psychosomatic Medicine, 48(7), 520-529.

Tracy, H. M., Norman, D. K., & Weisburg, L. J. (1987). Anorexia and bulimia: A comparison of MCMI results. In C. Green (Ed.) Proceedings of the First Conference on the Millon Inventories. Minneapolis, MN: National Computer Systems.

Turnbull, J. D., Freeman, C. P. L., F. Barry, & Annandale, A. (1987). Physical and psychological characteristics of five male bulimics. British Journal of Psychiatry, 150, 25-29.

Vandereycten, W., & Meermann, R. (1984). Anorexia nervosa: A clinician's guide to treatment. Berlin: de Gruytor.

Vigersky, R. A., Loriaux, D. L., Andersen, A. E., Mecklenburg, R. S., & Vaitukaitis, J. L. (1976). Delayed pituitary hormone response to LRF and TRF in patients with anorexia nervosa and with secondary amenorrhea associated with simple weight loss. Journal of Clinical Endocrinology and Metabolism, 43, 893-900.

Wallach, J. D., & Lowenkopf, E. L. (1984). Five bulimic women, MMPI, Rorschach, and TAT characteristics. International Journal of Eating Disorders, 3(4), 53-66.

Waller, J. V., Kaufman, M. R., & Deutsch, F. (1940). Anorexia nervosa: A psychosomatic entity. Psychosomatic Medicine, 11(1), 3-16.

Walsh, B. T., Roose, S. P., Glassman, A. H., Gladis, M., & Sadik, C. (1985). Bulimia and depression. Psychosomatic Medicine, 47(2), 123-131.

Wardel, J. & Beinart, H. (1981). Binge eating: A theoretical review. British Journal of Clinical Psychology, 20, 97-109.

Warren, W. (1968). A study of anorexia nervosa in young girls. Journal of Child Psychology and Psychiatry, 9, 27-40.

Wechsler, D. (1955). Wechsler adult intelligence scale. New York: Psychological Corporation.

Weisberg, L. J., Norman, D. K., & Herzog, D. B. (1987). Personality functioning in normal weight bulimia. International Journal of Eating Disorders, 6(5), 615-631.

Weiss, S. R., & Ebert, M. H. (1983). Psychological and behavorial characteristics of normal-weight bulimics and normal-weight controls. Psychosomatic Medicine, 45(4), 293-303.

Wermuth, B. M., Davis, K. L., Hollister, L. E. & Stunkard, A. J. (1977). Plenytoin treatment of the binge eater syndrome. American Journal of Psychiatry, 134, 1249-1253.

Williamson, D. A., Kelley, M. L., Davis, C. J., Ruggiero, L., & Blouin, D. C. (1985). Psychopathology of eating disorders: A controlled comparison of bulimic, obese, and normal subjects. Journal of Consulting and Clinical Psychology, 53(2), 161-166.

Williamson, D. A., Kelley, M. L., Davis, C. J., Ruggiero, L., & Veitia, M. C. (1985). The psychophysiology of bulimia. Advances in Behavioral Research and Therapy, 1, 163-172.

Willmuth, M. E., Leitenberg, H., Rosen, J. C., & Cado, S. (1988). A comparison of purging and nonpurging normal weight bulimics. International Journal of Eating, 7(6), 825-835.

Wilson, C. (1982). The fear of being fat and anorexia nervosa. International Journal of Psychoanalytic Pscyhotherapy, 233-256.

Wilson, C. P., & Mintz, I. (1982). Abstaining and bulimic anorexics: Two sides of the same coin. Primary Care, 9, 517-530.

Winer, B. J. (1971). Statistical principles in experimental design. New York: McGraw-Hill.

Yates, W. R., Sieleni, B., Reich, J., & Brass, C. (1989). Comorbidity of bulimia nervosa and personality disorder. Journal of Clinical Psychiatry, 50(2), 57-59.

BIBLIOGRAPHY

American Psychiatric Association. (1980). Diagnostic and statistical manual of mental disorders (3rd ed.). Washington, DC: Author.

Anthony, E. J. (1971). A study of "Screen Sensations." Psychoanalytic Study of the Child, 16, 211-245.

Bauer, B. G., Anderson, W. P., & Hyatt, R. A. (1986). Bulimia: Book for therapist and client. Muncie, IN: Accelerated Development.

Bell, M., Metcalf, J., Ryan, E. (1979). Reality testing and object relations: A self-report instrument. Paper presented at the 87th Annual Convention of the American Psychological Association, New York.

Bell, M., Metcalf, J., & Ryan, E. (1980). Reality testing-object relations assessment scale: Reliability and validity studies. Paper presented at the 88th Annual Convention of the American Psychological Association, Montreal, Canada.

Bellak, S., Jurvich, M., & Gediman, H. (1973). Ego functions in schizophrenics, neurotics, and normals. New York: Wiley.

Blanck, G., & Blanck, R. (1979). Ego psychology II: Psychoanalytic developmental psychology. New York: Columbia University Press.

Blanck, G., & Blanck, R. (1986). Beyond ego psychology: Developmental object relations theory. New York: Columbia University Press.

Bliss, E. L., & Branch, C. H. (1960). Anorexia nervosa: Its history, psychology and biology. New York: Hueber.

Bruch, H. (1977a). Anorexia nervosa. In S. C. Feinstein & P. L. Giovacchini (Eds.), Adolescent Psychiatry (pp. 293-303). New York: Aronson.

Bruch, H. (1977b). Anorexia nervosa and its treatment. Journal of Pediatric Psychology, 2(3), 110-112.

Bruch, H. (1982). Anorexia nervosa: Therapy and theory. The American Journal of Psychiatry, 139(2), 1531-1538.

Chernin, K. (1985). The hungry self: Women, eating, and identity. New York: Harper & Row.

Chessick, R. D. (1966). The psychotherapy of borderline patients. American Journal of Psychotherapy, 20, 600-614.

Crowther, J. H., Chernyk, B., Hahn, M., Hedeen, C., & Zaynor, L. (1983). The prevalence of binge eating and bulimia in a normal college population. Paper presented at the 58th Annual Meeting of the Midwestern Psychological Association, Chicago, IL.

Crowther, J. H., Post, G., & Zaynor, L. (1985). The prevalence of bulimia and binge eating in adolescent girls. International Journal of Eating Disorders, 4(1), 29-42.

Eichenbaum, L., & Orbach, S. (1983). Understanding women: A feminist psychoanalytic approach. New York: Basic Books,

Enright, A. B., & Sansone, R. (1983). Medical complications in eating disorders. National Anorexic Aid Society, Inc. Newsletter, 6(2), 1-2.

Fries, H. (1977). Studies on secondary amenorrhea, anorectic behavior, and body-image perception: Importance for the early recognition of anorexia nervosa. In R. Vigersky (Ed.), Anorexia nervosa (pp. 163-176). New York: Raven Press.

Gallo, L., & Randel, A. (1981). Chronic vomiting and its effect on the primary dentition: Report of a case. Journal of Dentistry for Children, 48, 383-384.

Golden, N., & Sacker, I. M. (1984). An overview of the etiology, diagnosis, and management of anorexia nervosa. Clinical Pediatrics, 23(4), 209-214.

Goode, E. T. (1985). Medical aspects of the bulimic syndrome and bulimarexia. Transactional Analysis Journal, 15, 4-11.

Gray, J. J., & Ford, K. (1985). The incidence of bulimia in a college sample. International Journal of Eating Disorders, 4(2), 201-210.

Halmi, K. A., Falk, J. R., & Schwartz, E. (1981). Binge-eating and vomiting: A survey of a college population. Psychological Medicine, 11, 697-706.

Humphrey, L. L., Apple, R. F., & Kirschenbaum, D. S. (1986). Differentiating bulimic-anorexic from normal families using interpersonal and behavioral observational systems. Journal of Consulting-Clinical Psychology, 54(2), 190-195.

Hyler, S. E., & Frances, A. (1985). Clinical implications of Axis I-Axis II interactions. Comprehensive Psychiatry, 26, 345-351.

Jackson, D. N. (1970). A sequential system for personality scale development. In C. D. Spielberger (Ed.), Current topics in clinical and community psychology: Vol. 2 (pp. 61-92). New York: Academic Press.

Johnson, C., & Flach, A. (1985). Family characteristics of 105 patients with bulimia. American Journal of Psychiatry, 142(11), 1321-1324.

Jones, D., Fox, M., Babigan, H., & Hutton, H. (1980). Epidemiology of anorexia nervosa in Monroe County, New York: 1960-1976. Psychosomatic Medicine, 42, 551-558.

Kalucy, R. S., Crisp, A. H., Lacey, J. H., & Harding, B. (1977). Prevalence and prognosis in anorexia nervosa. Australian and New Zealand Journal of Psychiatry, 11, 251-257.

Kalucy, R. S., Gilchrist, P. N., McFarlane, C. M., & McFarlane, A. C. (1985). The evolution of a multitherapy orientation. In D. M. Garner & P. E. Garfinkel (Eds.), Handbook of psychotherapy for anorexia nervosa and bulimia. New York: Guilford.

Kestenberg, J. (1971). From organ-object imagery to self and object representations. In J. B. McDevitt & C. F. Settlage (Eds.), Separation-individuation: Essays in honor of Margaret S. Mahler (pp. 75-99). New York: International Universities Press.

Kog, E., Vertommen, H., & Vandereycken, W. (1987). Minuchin's psychosomatic family model revised: A concept-validation study using a multi-trait-multimethod approach. Family Process, 26, 235-253.

Loevinger, J. (1972). Some limitations of objective personality tests. In J. N. Butcher (Ed.), Objective personality assessment. New York: Academic Press.

Luby, E. D., Marrazzi, M. A., & Kinzie, J. (1987). Case reports: Treatment of chronic anorexia nervosa with opiate blockade. Journal of Clinical Psychopharmacology, 7(1), 52-53,

Marcus, M. D., Wing, R. R., & Hopkins, J. (1988). Obese binge eaters: Affect, cognitions, and response to behavioral weight control. Journal of Consulting and Clinical Psychology, 56(3), 433-439.

Masterson, J. F. (1972). Treatment of the borderline adolescent: A developmental approach. New York: Wiley.

Masterson, J. F. (1974). Intensive psychotherapy of the adolescent with a borderline syndrome. In S. Arieti (Ed.), American handbook of psychiatry: Vol. 2 (pp. 250-263). New York: Basic Books.

Masterson, J., & Rinsley, D. B. (1975). The borderline syndrome: The role of the mother in the genesis and psychic structure of the borderline personality. International Journal of Psycho-Analysis, 56, 163-177.

Minuchin, S., Rosman, B. L., & Baker, L. (1978). Psychosomatic families: Anorexia nervosa in context. Cambridge, MA: Harvard University Press.

Mitchell, J. E., Pyle, R., Eckert, E., Pomeroy, C., & Hatsukami, D. (1988). Patients versus symptomatic volunteers in bulimia nervosa research. International Journal of Eating Disorders, 7(60), 837-843.

Nylander, I. (1971). The feeling of being fat and dieting in a school population. Acta Sociomedica Scandinavia, 3, 17-26.

Orbach, S. (1985). Accepting the symptoms: A feminist psychoanalytic treatment of anorexia nervosa. In D. M. Garner & P. E. Garfinkel (Eds.), Handbook for psychotherapy of anorexia nervosa and bulimia (pp. 83-104). New York: Guilford.

Patton, G. C., Wood, K., & Johnson-Sabine, E. (1986). Physical illness: A risk factor in anorexia nervosa. British Journal of Psychiatry, 149, 756-759.

Pfohl, B., Coryell, W., Zimmerman, M., et al. (1986). DSM III personality disorders: Diagnostic overlap and internal consistency of individual DSM III criteria. Comprehensive Psychiatry, 27, 21-31.

Pyle, R., Mitchell, J., Eckert, E., Halvorson, P., Newman, P., & Gott, G. (1983). The incidence of bulimia in freshman college students. International Journal of Eating Disorders, 2, 75-85.

Rizzuto, A. M. (1985). Eating and monsters: A psychodynamic view of bulimarexic nervosa and bulimia. In S. W. Emmett (Ed.), Theory and treatment of anorexia nervosa and bulimia: Biomedical, sociocultural, and psychological perspectives (pp. 194-210). New York: Brunner/Mazel.

Saul, S. H., Dekker, A., & Watson, C. G. (1981). Acute gastric dilation with infarction and perforation: Report of fatal outcome in patient with anorexia nervosa. GUT, 22, 978-983.

Schafer, R. (1968). Aspects of internalization. New York: International Universities Press.

Selvini-Palazzoli, M. (1971). Anorexia nervosa. In S. Arieti (Ed.), The biennial of psychiatry and psychotherapy. New York: Basic Books.

Siegel, S. (1956). Nonparametric statistics for the behavioral sciences. New York: McGraw-Hill.

Silber, T. J. (1986). Anorexia nervosa in Blacks and Hispanics. International Journal of Eating Disorders, 5(1), 121-128.

Stone, M. (1973) Early history of child psychiatry. International Journal of Child Psychotherapy, 2, 264-308.

Striegel-Moore, R. H., Silberstein, L. R., & Rodin, J. (1986). Towards an understanding of risk factors for bulimia. American Psychologist, 41, 236-263.

Szmukler, G. I. (1985). The epidemiology of anorexia nervosa and bulimia. Journal of Psychiatric Research, 19(213), 143-153.

Theander, S. (1970). Anorexia nervosa: A psychiatric investigation of 94 female patients. Acta Psychiatrica Scandinavia (Suppl.) 214, 1-194.

Whitehouse, A. M., & Button, E. J. (1988). The prevalence of eating disorders in a U. K. college population: A reclassification of an earlier study. International Journal of Eating Disorders, 7(3), 393-397.

Willi, J., & Grossmann, S. (1983). Epidemiology of anorexia nervosa in a defined region of Switzerland. American Journal of Psychiatry, 140(5), 564-567.

Wooley, S. C., & Wooley, O. W. (1985). Intensive outpatient and residential treatment of bulimia. In D. M. Garner & P. E. Garfinkel (Eds.), Handbook of psychotherapy for anorexia nervosa and bulimia (pp. 391-430). New York: Guilford.

Yager, J. (1982). Family issues in the pathogenesis of anorexia nervosa. Psychosomatic Medicine, 44, 43-60.

Yudkowitz, E. (1983, November/December). Bulimia: Growing awareness of an eating disorder. Social Work, 472-479.

VITA AUCTORIS

Sally George Margaret Wright was born in Great Falls, Montana, USA, on June 6, 1947. In June 1965, she graduated from Great Falls High School and in May 1969, she graduated Magna Cum Laude from Concordia College, Moorhead, Minnesota, USA, with a bachelor's degree in Latin and English. In January, 1976 she began studying music therapy at Wayne State University in Detroit, Michigan, USA, but later switched her major concentration to the study of psychology and education. In September, 1977, she was accepted into the graduate program in education at Wayne State University. In December, 1980, she received a Master of Education degree with a concentration in remedial reading at Wayne State University. In May, 1980, she entered the graduate program in clinical psychology at Oakland University, Rochester, Michigan, USA and was also enrolled in the Gerontology Program at Wayne State University as part of her requirements as a National Institute of Mental Health research trainee. In May, 1982, she received a Master of Arts degree in clinical psychology from Oakland University. In June, 1982, she began her studies in the graduate program in child clinical psychology at the University of Windsor, Windsor, Ontario, Canada. In September, 1988, she began working at Margaret Montgomery Hospital in Westland, Michigan, USA, where she helped start the partial hospitalization program and served as the limited licensed psychologist for the program. In March, 1989, she took a leave of absence from the hospital and returned in September, 1989, when she began working as a limited licensed psychologist in the inpatient units. She has two children, Nathaniel Schaedig and Sarah Anne Wright.